THE

# Journal of the American Medical Association.

EDITED FOR THE ASSOCIATION BY N. S. DAVIS.

PUBLISHED WEEKLY.

Vol. VI. CHICAGO, FEBRUARY 13, 1886. No. 7.

## ORIGINAL LECTURES.

### EPILEPSY—TORTICOLLIS—IRRITABLE HEART.

*A Clinical Lecture Delivered in the Jefferson College Hospital.*

BY ROBERTS BARTHOLOW, M.D.,

OF PHILADELPHIA, PA.

PROFESSOR OF MATERIA MEDICA AND THERAPEUTICS IN THE JEFFERSON MEDICAL COLLEGE.

We have here a woman approaching the climacteric period, who tells us that she has had four well-marked attacks of convulsions since she was 17 years of age, the last one occurring at night when she had several convulsions; between these well-marked attacks she has frequent less severe "spells," characterized by vertigo, more or less confusion of thought and speech and some staggering. She belongs to a neurotic family, in several members of which there is a well-marked history of epilepsy.

We have, as you know, two varieties of epilepsy, *petit mal* and *grand mal*, between which there is a vast gulf; a vast chasm separates the words epilepsy and epileptiform. As a rule, true or essential epilepsy begins at puberty, while epileptiform seizures may commence at any period of life. If the seizures begin at the age of 30 or 35, they are most likely dependent upon some organic disorder, and very frequently it is a tumor of the brain. In true epilepsy there is not always discoverable any gross lesion, though of course some lesion must be present, and it can occasionally be found. Habit, in neurotic persons, may be a cause; that is to say the nervous system forms a habit, just as there is a habit of taste or smell or any other kind of a habit; but, of course, habit plays but a small part in the causation.

When investigating epilepsy we must always look out for some reflex cause; inquire about the aura, which may give some clue to the origin, though it is rarely present, and when it is the sensation is usually referred to the stomach. It is of the utmost importance to inquire at what times the attacks occur, much more important than you would suppose, for attacks that occur at night are much less amenable to treatment and are much more obstinate. Mild seizures and those occurring at long intervals are likewise very obstinate. Those attacks that occur in the day time, with great violence, and are directly traceable to some cause, are the most satisfactory because we can usually relieve them by removing the cause. They are not infrequently due to the irritation from an overloaded stomach; we must always look for outside disturbances and remove them.

If there be any secret in the treatment of epilepsy, it is in regulating the diet. I am sure that more good has come from attention to this one point than from anything else. I am quite sure that it has worked many cures; drugs have a trifling potency compared with a rigid diet. The meals must be small at a time, meat only once daily, and the stomach should never be overloaded, while large draughts of liquid must be avoided, even of water. Fatty food should be interdicted, and but small quantities of starchy or saccharine matter allowed. For drugs, we must remember that this woman is approaching the climacteric period and that the attacks are growing worse, hence our drugs must be directed towards allaying any irritability of the sexual system. This can be best accomplished by the use of bromide of sodium, of which we will order one drachm, morning and evening, for the first week, and after that one drachm daily, in two doses. We will also look to all the other functions, and if we find any derangement we will remedy it.

*Torticollis.*—This might seem, at first blush, like a trifling case to bring before you, but it offers some very interesting points. I have repeatedly impressed upon you the importance of studying the physiognomy of disease, and this case serves to point the remarks. An acute observer could make a diagnosis in this case without asking a question. The external expression of parts, the features will reveal much, and it will repay you to cultivate the habit of close observation. You may recall the old adage, "Show me your ear and I will tell you who you are, whence you came and whither you go." There is much in the idea conveyed by this adage, and you should not forget it. Now when I look closely at this woman, I notice that she holds her head in a constrained position; when at rest it is drawn somewhat backwards towards the right shoulder, and there is more or less spasm, more or less involuntary movement. By an effort of the will, you will notice that she can keep her head straight before her; the sterno-chido-mastoid muscle is rigid, as is also the trapezius, the anterior edge of which stands out. The muscles of the opposite side seem relaxed.

We have here, then, a case of torticollis, which is one of the most difficult diseases among the minor ills to treat, which statement I am very sure you will verify after you have been a short time in practice. The muscles of one side are in a state of spasm in

this disease, while those on the other are paretic. One set of muscles are acting over-powerfully, the seat of the disease being in the nerves that supply the muscles, there is an irritation of the motor nerve, and this irritation excites the muscle to spasmodic contraction. In every voluntary movement there is a contraction of the muscle under the stimulus of the will, but here the will is in abeyance; the over-acting muscles are hypertrophied, while those on the opposite side are atrophic; the disease is therefore secondary to an irritation of the nervous apparatus.

All kinds of remedies have been used in vain, but we can do so much in these cases by attention to little details and can cure the disease if it has not lasted too long. It has been present in this case for a year. The first point is to look for a cause of irritation to the nerves; is it impinged upon by a tumor, a gumma? If so we have clear sailing. May be the irritation may be reflex from the uterine system, as is not uncommon, and in such cases, of course, we can do nothing towards a cure until we remove the uterine trouble. It is a fact that I have observed that torticollis is especially common among women, and in many of these cases it is associated with uterine trouble. This woman is 49 years old and is now passing through the change of life, it having been seven weeks since her last sickness; the uterine irritation about the climacteric period is a not uncommon cause. Inquire always whether it is due to any disturbance of the stomach or intestinal canal, or whether it is purely neurotic from the climacteric; I am inclined to lean to this latter view in the case before us. We must address our remedies, therefore, to the nervous system of the climacteric. Galvanism and faradism will do a great deal of good, and the best procedure is to galvanize the overacting and faradize the underacting muscles; I will use fifteen cells of a small battery, applying the steady, non-interrupted current on the contracted muscles, and the interrupted current on the paretic muscles; I prefer the slow interrupted current, for the rapid interruptions will throw the muscles into a tetanic condition; the slow current should be applied to each muscle in turn and must be used regularly and perseveringly every day.

A great deal can also be accomplished by gymnastic training under the direction of the will, which should be used to educate the weaker muscles to antagonize the stronger; it is wonderful how much can be accomplished in this direction by the force of the will. All drugs that have a reputation for controlling muscular spasm have been tried in this affliction, and hyoscyamus and gelseminum have done some good, but they do not cure. Arsenic thrown directly into the muscle, by hypodermic injection, has done more good than anything else; its use was begun empirically, because it was known to do good in chorea, which is a disease somewhat analogous to torticollis; some very obstinate cases have been thus cured by arsenic. Cocaine, the drug of the day, has also been used with advantage, injections of one-sixth or one-fourth of a grain being made. While these injections are being made into the contracted muscles, strychnia should be similarly used in the paretic muscles. By these combinations we can generally cure the disease, if there be no lesion of the nerve, but we will find it a very obstinate disease to handle.

*Irritable Heart.*—Here we have a pale, anæmic woman, in a state of constant nervous tremor, who was told some years ago that she had hypertrophy of the heart, and who ever since has lived in constant fear of a sudden death, afraid to go to sleep, afraid to leave home, unable to perform her domestic duties, and with life a burden to her. She is now at the climacteric period, but she was excessively nervous even before this time. Upon examination I find simply a highly irritable nervous system, which I believe to be mainly due to the high condition of anæmia which the woman presents. She has a neurotic temperament. The heart is not irritable as we see it in exophthalmic goitre, where it continually pulsates at the rate of one hundred or more; her heart, while it is now, under excitement, beating at the rate of one hundred or one hundred and twenty, will, when she is quiet, drop down many beats; but the least emotion will make it drive ahead at a very rapid rate. There is of course some hypertrophy, but this is due to the excessive action of the heart; it is compensatory, it is physiological, and does not constitute a disease. The anæmia which deranges the nervous system is in turn due to digestive disorders, which we find evidenced by heart-burn, acidity and regurgitation of food; she has an insufficiency of diet and poor digestion; there is a degeneracy of primary and secondary assimilation.

It is idle to try to relieve this condition of the nervous system, unless we supply it with good blood; it cannot be done with drugs alone; the nervous system must have good blood; we cannot so change this system as to make it functionate as it would in a person of lymphatic temperament, but we can greatly moderate its erratic manifestations, we can quiet it. We will commence by giving this woman ten drops of dilute nitric acid thrice daily; in a little while we will order her a more generous diet, prescribing especially milk and eggs; interdicting stale bread (of which she eats a great deal), and coca shells (which she drinks), because she cannot digest the fats; this I know because the eructations or regurgitations are of an offensive acid character; butyric acid is set free.

We must also leave out starchy, saccharine, and all fermenting foods. Nutrition must be forced; she should have milk every three hours, eggs daily, and meat at every meal, and of meat she should have fresh beef, game and poultry (except veal and duck), fresh fish, no salt meat or salt fish of any kind. She should eat but little bread, substituting for it such vegetables as celery, lettuce, or spinach, those that are free from sugar or starch. I am in the habit of telling such patients to eat lettuce in the English fashion, that is, to take out the centre leaves and dip them in salt. If the patient can have cod liver oil, without its producing acid indigestion, it should be given in doses of one drachm in half an ounce of whiskey thrice daily. I say whiskey with reluctance, and would not order it at all if this woman were only eighteen, but at forty-nine there is not so much dan-

ger of establishing a bad habit. A person at fifty years of age, who has led a temperate life, can take a little whiskey as food, as alcoholic food, with advantage, but it will do no good to one who has been a toper. It is, when properly used, an admirable food, quickly oxydized, and it helps primary assimilation.

Oxygen must also be ordered, not as "compound oxygen," the greatest imposition of the day, but oxygen as we have it in the open air. I am frequently asked my opinion about "compound oxygen," and when I explain that the ordinary atmosphere is only compound oxygen my inquirers are amazed to think how foolish they have been to pay a big price for that which they could obtain for nothing. Exercise should be enjoined just at the end of digestion, when the food is ready to be assimilated and requires an abundance of oxygen to complete the metamorphosis.

Exercise should not be indulged in just after a full meal, for at that time the blood that exercise would call to the muscles or brain-work to the brain is required in the stomach to aid digestion. If this woman will follow my advice she will be relieved entirely, and the demon that has haunted her for years will prove no demon at all, for there is here only a normal hypertrophy, such as we see in the blacksmith's arm from excessive use.

## ORIGINAL ARTICLES.

### SOME REMARKS ON THE MANAGEMENT OF PROTRACTED FIRST STAGE OF LABOR.[1]

BY HENRY DAVIDSON FRY, M.D.,
OF WASHINGTON, D. C.

I am led to select this subject for discussion chiefly because of my belief that the proper management of the first stage of labor is more neglected than any of the processes connected with the child-bearing act.

Sufficient attention is given to the elucidation and treatment of all the conditions, natural and unnatural, that do and may arise during the progress of the subsequent stages. The consequence is that the general practitioner is ever ready to lend assistance at such times, whilst in the first stage, supported by precept and habit, he preserves a passive indifference, waiting, like Micawber, not "for something to turn up," but with equal patience *for the womb to open.* During the weary hours that his patient is suffering these pains he seems content to limit his duties to the occasional examination of the case, and even this is done more for his own comfort than his patient's, the object being to form some idea when his services will be required.

An explanation, in part, for such inactivity is thus given by Lusk:[2] "There is an erroneous opinion that, so long as the membranes are unruptured, this condition (the first stage) may be allowed to go on indefinitely." To add to the prevalence of such a dangerous opinion so able an obstetric writer as Leishman[3] gives the following advice: "And, even in cases where its duration is prolonged far beyond the average, this of itself is no excuse for interference, unless the general symptoms indicate that it is our duty to accelerate the labor by such means as are within our reach—a state of matters which is of rare occurrence." Practically the same statement regarding the trivial consequence of prolonged first stage is made by Playfair[4] and by Cazeau.[5] In his opposition to this view Lusk[6] continues: "There is nothing that requires more judgment in midwifery practice than to decide when the time has arrived at which delay is fraught with more danger than active interference. For my own part, I believe that many fair lives are needlessly squandered because of excessive timidity begotten of imperfect obstetric teachings." Delay cannot be otherwise than fraught with more danger than active interference when that interference is in itself harmless. The majority of the various remedies recommended for accelerating the dilatation of the os can do no injury unless most inappropriately employed. The few that cannot be classed with these may be reserved until, as Leishman has said, "general symptoms indicate that it is our duty to accelerate the labor."

It is as unwise as inhuman to allow women to suffer the pains of the first stage of labor when protracted for hours beyond physiological limits. The loss of sleep, the want of nourishment, the anxiety of protracted labor, and above all the nervous depression produced by pain; all these tend to exhaust the patient and prepare the way for uterine inertia. Postpartum shock and hæmorrhage, septic infection, and least of all, a slow convalesence, are some of the *sequelæ* of protracted first stage. An analysis of the histories of those labors which are terminated by instrumental interference will demonstrate that very many are preceded by slow dilatation of the os. The happy issue of many a case of labor is dependent, I firmly believe, upon the appreciation of these facts and the result of timely interference exercised in the first stage as well as in later ones.

At the meeting of the American Medical Association held in this city in the spring of 1884, Dr. Lusk read a paper "On Sudden Death in Labor and Childbed."[7] The following case furnished a theme for his subsequent remarks: On the morning of January 1 he had been called to attend a young woman, aged 23 years, who was suffering the pains of her first confinement. The parts were very sensitive to the touch, the head presented, and the cervix was beginning to dilate. He ascertained that labor pains had been recurring since the preceding afternoon, and that his patient had passed a sleepless night. The head was low in the pelvic cavity, but labor dragged along so slowly that little progress had been made at eleven o'clock.

The head was dilating the cervical canal without the formation of the bag of waters. Dr. Lusk ad-

[1] Read before the Medical Society of the District of Columbia, January 14, 1886.

[2] Science and Art of Midwifery. New York, 1884, p. 424.

[3] System of Midwifery. 1875, p. 273.

[4] System of Midwifery. Phila., 1880, pp. 332, 333.

[5] Theory and Practice of Obstetrics. Cazeau and Tarnier. Phila., 1884, pp. 605, 606.

[6] Ibid., p. 425.

[7] JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, Vol. III, No. 16, p. 427.

ministered sufficient chloroform to obtund the sensibility of the vagina, and lifted the head from contact with the cervical walls. The bag of waters then formed and dilatation rapidly followed. At about two o'clock in the afternoon forceps were applied and delivery effected without further trouble. Post-partum hæmorrhage was promptly arrested by a hot vaginal injection. Alarming symptoms developed, the wrist became pulseless, the extremities cold. A temporary improvement encouraged false hopes, and in four or five hours after delivery his patient was a corpse. Dr. Lusk then took up for consideration the various causes that may give rise to sudden death after labor. The symptoms of the entrance of air into the circulation, of thrombosis and embolism, and of nerve exhaustion and shock were carefully reviewed, and the unhappy termination of the case was attributed to the latter condition. The interesting paper was concluded by these significant words; "As the nervous organization of woman loses in powers of resistance as the penalty of a higher civilization and of artificial refinement, it becomes imperatively necessary for the physician to guard her from the dangers of excessive and too prolonged suffering. Especially I would raise my voice in warning against the current opinion that the length of the first stage of labor before the rupture of the membranes is a matter of indifference, a teaching which I believe has cost the lives of many women; in a few, death resulting from shock; in more, the exhausted condition in which the woman is left after childbirth rendering her an easy prey to the perils of the puerperal state."

Before offering in review some of the means at our command for accelerating dilatation of the os, I invite attention to a few facts connected with the mechanism of this stage of labor. During pregnancy we recognize the existence of two processes; first, the growth of a body to be expelled; and second, the growth of the organ which is to expel it. The fecundation of the ovule is followed by segmentation, and, in rapid order, the developmental changes of embryological life. With the beginning of fecundation the musculature of the uterus develops rapidly. The hard fibrous character of the uterine wall becomes replaced by a highly sensitive, soft, muscular structure. From the early months of gestation to the advent of labor this muscular organ is undergoing constant contraction and relaxation, as if impatient to expel the contents. As pregnancy progresses the contractions increase in strength, and often imperceptibly merge into true pains of labor. Several weeks preceding labor the uterine tumor with its contents settles into the pelvic brim or canal, and certain preparatory changes take place in the tissues of the cervix. They become softened and œdematous, and the canal is obliterated.

The first object to be accomplished by intermittent contractions of the womb is dilatation of the cervix. The muscular apparatus is much less developed here than at the fundus, it has fewer circular fibres, and is further weakened by an opening in its wall. The compression of the contents of the uterus, which is coincident with each contraction, causes this part to bulge because it offers less mechanical resistance. The lower segment of the uterus becomes softened and thinned, and the internal os is gradually dilated. Contractions of the longitudinal fibres of the cervix also tend to pull the os open. A similar action is possessed by the uterine ligaments when descent of the uterus favors their coming into play. Each contraction is accompanied by tension of the membranes stretched over the os, which, as the os dilates, become more and more convex. The support afforded the bag by atmospheric pressure being less than the intra-uterine pressure, the decidual membranes are slipped down and protruded into the vagina. The difference of the two forces increases as the os enlarges, and consequently the bag of waters forms more quickly after a certain degree of dilatation has occurred. The mechanism is similar to the action of cupping glasses, the rarefied atmosphere within the cup representing the intra-vaginal pressure. The same forces continued after rupture of the membranes give rise to the formation of the *caput succedaneum*. The protrusion of the bag with each uterine contraction furnishes an efficient hydrostatic wedge for aiding further dilatation of the opening.

If the presenting part of the fœtus be a favorable one, and no disproportion exists between it and the maternal passage, the lower segment of the uterine wall becomes closely applied and both engage within the pelvic canal. The best example of this is met with in head presentations, particulary in primiparous cases when the presenting part, enveloped by the uterine neck, is often observed nearly or quite down to the pelvic floor at the beginning of labor. Rupture of the sac now gives passage to the "forewaters," while the amniotic fluid surrounding the fœtal body is in great part retained. This condition, viz.: the engagement of the presenting part and the lower segment of the uterus within the brim or canal, has an important bearing upon the question of artificial rupture of the membranes.

Having glanced at the mechanism by which dilatation of the os is effected, we are now prepared to formulate the conditions favoring a normal first stage. These are:

1. Regular intermittent contractions of the uterus, which, besides possessing the requisite degree of strength, must act in a line parallel to the axis of the pelvic brim. The latter condition is necessary in order that the force of the contractions may be made to impinge upon the tissues surrounding the os.

2. A softening and thinning of the structures of the cervix and lower uterine segment.

3. The formation of the bag of waters.

4. Descent of the uterus in order that the dilating influence of the sacro- and vesico-uterine ligaments may come into action.

Weak contractions of the uterus are witnessed in first labors occurring in very young or old subjects. Rapid child-bearing and preëxistent pathological conditions of the uterine structure are some of the influences leading to such a result. Feeble contractions are likewise dependent upon over-distension of the uterine walls by excess of amniotic fluid or the presence of twins. Contractions, although strong, may be inefficient because irregular and spasmodic. They are generally short and cramp-like in character, with

little period of repose intervening. Often associated with these are mental emotions, nervous excitement, a filled bladder or loaded rectum.

Organic softening and thinning of the cervix may be prevented by pathological conditions of the tissues. Adhesions existing between the decidual and uterine membranes near the internal os may be the means of preventing the formation of the bag of waters. Paucity of amniotic fluid and the early engagement of the presenting part within the pelvic brim are additional obstacles to such formation.

Failure of descent of the uterus and its fixation in the axis of the pelvis arises from malformation of the pelvis, or from some disproportion between the diameters of the presenting part and pelvic brim, or from the axis of the uterus and that of the pelvic brim not being parallel.

Such a list, incomplete as it is, of the various conditions that may interfere with the physiological progress of the first stage of labor, conveys some idea of the complications to be overcome by treatment. It further teaches the importance of ascertaining the cause of delay in any given case before attempting a plan of action. No fixed rules are laid down to guide us. Individual experience and close observation will most likely enable us to detect the nature of the perturbating influences which retard dilatation and will point out the line of treatment most likely to meet the demands of the case. "Trifles light as air" appropriately used will succeed when powerful means may not only fail, but do harm if injudiciously employed. The following case illustrates this point:

I was called to see Mrs. P— at 5:30 A. M. of May 21, 1885. Labor pains had commenced the day before and had annoyed her at irregular intervals since. She had not considered it necessary to send for me until just before the hour mentioned, when, while sitting in a chair, a sudden gush of water saturated her clothing. She retired, and when I arrived, the pad upon which she was lying, which consisted of four thicknesses of a quilt, was wet to the rubber cloth beneath. Examination revealed the os dilated as large as a silver dollar, the head was presenting, *and the membranes were intact.* The vagina was moist, but no fluid came away during the examination. The pains had ceased with the appearance of the discharge. I directed her to stay in bed and to send for me on the recurrence of pain. Not having received any message I called about noon, and found the same condition of affairs existing. Two grains of opium, which were ordered to relieve her of irregular pains, restored quiet, she slept some, and was comfortable until midnight, when labor set in. About one o'clock another discharge of water occurred, and I saw her an hour later. The bag of waters was ruptured, and the head was engaged in the upper part of the pelvic canal in the right occipito-anterior position. The os was dilated as large as the rim of a tea-cup, its margin was thinned and the superjacent tissue moist, soft, and dilatable. While verifying the position of the fœtus by means of abdominal palpation, it was discovered that the whole globular mass composed of the gravid uterus was deviated to the right of the median line. For the next half-hour, during which she was allowed to remain upon her back, strong contractions produced no appreciable change. She was directed to turn on her left side for the purpose of overcoming this uterine obliquity, and in ten minutes the head was at the vulva.

The proper course to pursue in this case was plainly manifested and promptly yielded its result. If the cause of delay had been misinterpreted and oxytocic remedies administered, or any inappropriate method adopted to hasten delivery, harm might have resulted; at any rate the above happy termination could not have been looked for. This was the patient's tenth confinement, and the preceding pregnancies had so distended and relaxed her abdominal parietes that sufficient support was not afforded to keep the gravid uterus in its proper position. The first discharge of fluid which occurred in such large amount twenty-four hours before labor I should study under the head of hydrorrhœa gravidarum, a subject which has been worked up thoroughly by a fellow member of this Society—Dr. T. C. Smith. I would add that the expulsion of the offspring was followed by considerabe amniotic fluid.

*Treatment.*—The most important of the remedies at our command for accelerating the first stage of labor will be considered under three separate classes:

*First.* Pain-stilling agents.

*Second.* Remedies employed to increase uterine action.

*Third.* Remedies applied directly to the os to assist its dilatation.

This division of the subject facilitates its study, but is open to the objection of inaccuracy. Remedies of the first class often increase uterine action, and any direct application of methods to the os most certainly do. In fact, much of the good effect attributed to the latter class doubtless owes its efficacy to increase of uterine action.

I. In the first class are placed opium, chloral, and anæsthetics. The most signal benefit follows the employment of these agents in suitable cases. Most confidence can be placed in them when delay accompanies irregular and spasmodic pains, and when weak contractions are the result of depression and loss of rest from protracted suffering. It has been my lot to see dilatation of the os begin promptly, and labor soon completed after the administration of a few doses of chloral, when seventeen hours of delay had previously witnessed no progress of the first stage.

Opium must be given in full dose by mouth, by rectum, or by the hypodermatic injection of morphia, chloral by mouth or rectum. The administration of either of these is followed, as a rule, by one of two effects. There may occur the immediate conversion of the ineffectual pains into such as produce a favorable impression upon the unyielding os. Nervous excitement gives way to quiet, the duration of the pains is lengthened, and the intervals of repose are periods of recuperation.

The other effect is *rest*, that is, the cessation of uterine contraction for one, two or more hours, probably with sleep, and then the return of pain and satisfactory progress of dilatation. It is a common

experience to witness the cervix relax and dilate during this period of repose. Some writers, among them Playfair,[8] deny that chloral possesses this power to annul uterine action, and attribute the beneficial influence of the drug to the former of the two effects above mentioned. On the contrary, I have distinctly seen such controlling influence follow its administration. Only recently a case came under observation in which 40 grains, given in two doses, produced entire cessation of pain and caused sleep during the most part of the succeeding four hours. At the end of that time regular and strong contractions set in, the labor, which had lingered all night, progressed rapidly, and in less than two hours the infant was born. The os softened and dilated during the repose.

Anæsthesia, particularly by chloroform, is, at times, the remedy *par excellence*. The following history demonstrates the class of cases in which chloroform may be used with the best prospect of success. Such labors usually occur in primiparæ, and in women of highly sensitive nervous organization.

*Case.*—On Sunday, at noon, Mrs. N. P., a primipara, was taken with labor pains which were short, sharp, and returned every four or five minutes. At eight o'clock in the evening I found the following condition: The head had descended almost to the floor of the pelvis and presented in the R. O. A. position, the os was the size of a ten-cent piece, and the membranes were drawn tightly over the opening during the pains. The contractions were so frequent and painful I ordered 30 grains of chloral to be taken in two doses. The effect was to compose her and cause drowsiness for awhile, but not to lengthen the intervals of the pains. At 1:30 A. M. she became nervous and declared she could stand the suffering no longer. She shrank from vaginal examinations in consequence of the painful condition of the parts, the genital canal was dry, the os thin and wiry at its border, and dilatation but little increased. The hypodermatic injection of ¼ grain of morphia sulphate was given without any apparent result. The pains continued to recur frequently, to last but a short time, and were accompanied by unusual suffering.

3 A. M.—Examination with finger still caused excessive pain, the head was in contact with the perineum, and the os was thin and dilated the size of a twenty-five cent piece. The suffering was so great, and chloral and morphia having failed to bring relief, I determined to try the effect of the inhalation of chloroform. It was magical. She no longer complained of pain, the contractions increased in strength, they lasted longer and recurred less frequently. As soon as one passed off she dozed until the next awakened her. At no time did she inhale sufficient chloroform to produce unconsciousness; she could tell when the contraction reached its acme, and when it was declining.

3:45 A.M. Vaginal examination caused less distress and the parts were moist. More progress was made within this hour than had been the case during the preceding fourteen hours of suffering. The bag of waters was formed and protruding, and the os was dilated to the size of a silver dollar. Composure had taken the place of her nervous excitement. In one hour and a half only half an ounce of chloroform had been administered.

4:30 A.M. The strength and duration of the contractions were increased. mucus flowed from the vagina, and the os continued to dilate. At 5 o'clock the chloroform was withheld for a time and then employed intermittingly until the end of labor.

At 7 o'clock, four hours after commencing the use of chloroform, the child was born.

*II. Remedies to Increase Uterine Action.*—Of this class I will refer briefly to electricity, the introduction of the soft bougie, and artificial rupture of the membranes. The administration of ergot during the first stage justly finds little favor at the present day. Quinine is highly recommended by some for its power of restoring strength to the weakened constructions. Manual pressure, so successfully employed by Playfair, is more applicable to the expulsive stage.

Attention is now being directed to the value of electricity in obstetrical practice, and from the published accounts of its action upon the gravid uterus excellent results may be expected to follow its use. One of the most interesting articles that has been written upon the subject recently is from the pen of Dr. W. T. Baird,[9] of Texas. Among the indications for its use he states: "That dilatation of the os is greatly facilitated, thereby shortening the labor in every stage." "This effect," he says, "I have constantly observed in all the cases which I have treated with the current, and it is easy to see that it follows as a consequence that, if the current will increase the force of the contractions of the longitudinal and oblique fibres of the uterus, the os will be more rapidly developed." . . . His results were obtained by use of the faradic current, the positive pole being applied to the lumbo-sacral region and the negative to the fundus uteri. An opportunity was recently presented to make a fair test of its value, and the effect was very decided in increasing the force and efficiency of the contractions, but I am sorry to admit I did not witness the wonderful sedative influence of the current as described by Dr. Baird.

The introduction of a soft bougie between the uterus and the membranes is an efficient means of increasing feeble contractions. It is best made use of when the membranes are intact, at any rate before the amniotic fluid is drained away.

Warm vaginal injections not only soften the os and assist dilatation, but also increase uterine action. By adding an antiseptic to the water they exert a twofold influence for good, and are particularly useful when, at the same time, other means are resorted to which require manipulation of the cervix.

Artificial rupture of the membranes is undoubtedly the most frequently employed of all the means for increasing pains and accelerating the first stage of labor. The procedure is by no means harmless. When the presenting part of the child is closely applied to the lower segment of the uterus, and when the pains have pushed both down into the pelvic canal, it may be justifiable to rupture the bag, *pro-*

[8] Ibid., pp. 289, 347.

[9] American Journal of Obstetrics, Vol. xviii, Nos. iv, v and vii, pp. 337, 481, and 719.

*vided other means have been tried and failed.* It is particularly called for when weak contractions result from overdistension and when delay is caused by adhesions between the lower uterine wall and the decidual membranes, preventing the os from retracting over the presenting part. It is wiser, under the circumstances, for the physician to hesitate before adopting a plan that favors laceration of the cervix, the immediate and remote evils of which are too well known. More reprehensible is its performance when the os is high, and when the presenting part does not engage in the brim.

III. The last class embraces *means applied directly to the cervix to facilitate dilatation.* Most important of these are Barnes' bags, manual dilatation, and efforts to correct displacement of the os, and to favor the formation of the bag of waters. Lusk recently presented before the Obstetrical Society of New York a pair of forceps which he had designed for dilating the os. This instrument differs from the narrow-bladed forceps of Taylor, which is intended to pass through a partly dilated cervix, and draw the head into the canal. I will call attention only to a few points. One is, the excellent result that often follows so simple a manœuvre as drawing a displaced os in the line of the axis of the pelvic canal. Such a change places the part in the most favorable position to receive the force of the uterine contractions. The most common condition calling for this interference is the backward displacement of the opening with the thinned anterior lip covering the presenting part. The finger should be passed into the os, and the part drawn forwards and held in place until the malposition is corrected. Lateral displacements require the same attention. The abdominal bandage may be needed in a few of the foregoing cases to correct the position of the fundus, or the same result may be obtained by changing the decubitus of the patient. Pushing up the anterior lip when caught between the presenting part and the symphysis pubis is a well recognized procedure.

Valuable assistance can sometimes be rendered by making efforts to favor the formation of the bag of waters. When failure is the result of paucity of amniotic fluid little, of course, can be done to remedy the difficulty. When due to adhesion of the decidual and uterine membranes these must be broken up by sweeping the finger around the inner surface of the uterus as far as it can reach. When the head is early engaged and prevents the fluid from passing to the bag, the presenting part must be raised and held until the pouch is felt.

Having enumerated and classified the principal remedies employed for protracted first stage of labor, I will conclude by hoping that the members of the Society will discuss the question and give their views concerning the following points:

1. How great are the dangers of protracted first stage of labor, and is it advisable to interfere?

2. What proportion of cases require such interference?

3. Individual experience regarding the most efficient remedies, and the indications for the use of each.

## OPERATION FOR CONGENITAL CATARACT IN TWENTY-FIFTH YEAR; VISION SLOWLY ESTABLISHED.

BY JULIAN J. CHISOLM, M.D.,

PROFESSOR OF EYE AND EAR DISEASES IN THE UNIVERSITY OF MARYLAND, AND SURGEON-IN-CHIEF OF THE PRESBYTERIAN EAR AND EYE CHARITY HOSPITAL, OF BALTIMORE, MD.

That children are born blind with cataract is a matter of every day observation. That these cataracts can be removed by absorption under surgical procedures is the experience of every ophthalmic surgeon, and that infants who have been operated upon for cataract can, when old enough, learn to read with proper glasses, has long since been established by thousands of witnesses. The acquisition of sight to those born blind is now, therefore, no novelty. Experience has also taught the surgeon that if good sight is to be secured to those born blind with cataract, the operation for the removal of the obstruction must be done very early in life. If the cloud in the pupil be allowed to remain for too long a time, during the growth of the child, the retina seems to be arrested in its development by the absence of its normal stimulus, strong light, and the needful sensitiveness of this membrane for good seeing is never acquired even when glasses have been carefully adjusted. Very rarely is useful vision secured to adults who have remained blind throughout their entire growing life, and hence the case now reported of blindness to the age of 25 possesses peculiar interest.

W. B., aged 25, was brought to me in July, 1882, for cataract operation. Soon after birth it was discovered that his pupils were not black but were of an ashy hue, which became the more conspicuous with his growth, and was finally diagnosed as congenital cataract. When the blind child had attained two years of age his parents allowed an itinerant oculist to operate upon one of his eyes by the needle puncture. He had promised to make the child see, but as iritis supervened and the pupil became closed, the operation proved a failure. This accident discouraged the parents and they refused to allow the other eye to be operated upon. When the boy attained a suitable age he was sent to the Virginia State Blind Asylum, and was there educated. He was taught, among other things, to cane chairs, and when he arrived at manhood this became his daily occupation. When 25 years of age, having heard what wonderful things were being done by modern surgery, the desire to see took possession of him, and with it came the hope that even he, blind as he had been from birth, might be made to see the forms which up to this time he had only known by feeling. He sought the advice of a clerical friend, now the Assistant Bishop of the Episcopal Church in Virginia. He brought him to my office and asked that the cataract be removed.

I found the eye previously operated upon lost, with no light perception remaining. The pupil was closed, the anterior chamber effaced, and the eye so disorganized by the former inflammation that there was nothing left of it but its name. The other eye had good light perception, and barring the white pupil seemed well formed and promised some results

from operation. I explained to him that the operation was not a difficult, dangerous nor painful one, and that his prospects for a successful extraction of the cataract were good, but that the retina may have lost nearly all of its sensitiveness, and that therefore he should not expect too much from the operative procedure. Under chloroform the lens was extracted through an upward iridectomy. No complications followed upon the operation. By the ninth day the wound had healed and the bandages were permanently removed. When examined the pupil was comparatively clear and the eye exhibited very little injection. There were a few opaque shreds of capsule in the pupil, but not enough to interfere with the functions of the eye, if the retina and optic nerve were in good condition.

He returned to his home one month after the operation, sadly disappointed that he could not see. When asked what difference there was between his present condition and his former state one month ago, he said that light appeared to him very much intensified, and that he could now detect the shadow of any body between him and the light, but that he could not recognize outlines of any object whatever. Sad at heart he went back to his old trade, at which he had become quite skilled, and I heard of him six months afterward as being lead about, in the absence of useful sight to guide himself. I had put his case down as one from which no good was now to be expected, and therefore dismissed him from my mind.

Early in January, 1886, three and a half years after the operation, I was visited by the Bishop, who in the course of conversation asked me whether I had heard of the sight which my patient had finally secured. He told me that he usually spent a part of his summer vacation in the neighborhood where this patient resided, and as he had always taken the deepest interest in his welfare, made it a point to visit him annually and watch his progress. For the first year after the operation the improvement was not great, so that he could not trust himself alone. The definition of large objects seem to dawn upon him very slowly. It took his retina two years to acquire sufficient sensitiveness to detect large objects and to permit him to avoid them in moving about. After two years he could walk alone, and now rides horseback all over the country. On the last visit the Bishop was delighted to note a marked improvement. His vision had become sufficiently acute to detect comparatively small objects, and even the alphabet had been conquered, and the reading of very large type had been acquired. He had secured the aid of interested friends who were instructing him in reading. A book of large print, letters one-fourth of an inch long, had been procured. In this, aided by a two-inch magnifying lens, he could read with some facility. It has taken him nearly four years to attain this degree of useful sight. This progress marks clearly the slow development of retinal sensibility, and from it we may expect that time will still further improve his vision.

I have not seen the patient since he left me for his home, 300 miles away from Baltimore, now nearly four years. The operation, as far as the cataract extraction went, was a success. Before he left me I could detect no abnormal changes in the fundus of the eye with the optical microscope. To what extent the peculiar functions of the retina had undergone development I had no means of determining. As he had no conception whatever of objects beyond what the handling of them would give him, I did not expect him to see or appreciate them immediately after the operation. If the acquisition of sight could be attained I knew that it would be of very slow development. Professional experience had taught us but little in this direction, and surgical reports were not rich enough in such material to give data upon which to build hope. The results of three years' development has put him further on the road to secure good vision than I had imagined possible.

I had previously operated upon a patient 22 years of age who had been brought up in a blind asylum. He could see to get about, but the presence of a zonal cataract in each eye from infancy did not permit him to see small objects. When the cataracts were removed after he had attained his majority his vision was so far improved that he then learned to to read, and eventually became a successful merchant. It took him nearly two years to acquire a facility to see coarse print, and he never exceeded *pica*, which is the largest type that printers use for the body of many books. No magnifying glass permitted him to recognize fine print. There was a great difference, however, in the amount of sight which these two patients started with. One had only light perception, the other already useful vision and the general recognition of all large objects.

Baltimore, February 2, 1886.

## INFLAMMATION OF THE LINING MEMBRANE OF THE FALLOPIAN TUBE, WITH EXUDATION OF PUS OR PUROFIBRINOUS FLUIDS.

BY R. STANSBURY SUTTON, M.D., LL.D.,
OF PITTSBURGH, PA.

This disease is termed salpingitis, and like a bronchitis, it may be acute or chronic. The acute form is not distinguishable from an ordinary peri-uterine inflammation. The chronic form may be recognized. In some cases the diagnosis is limited to certain periods in the history of the case; in other cases the symptoms may be so constant as to render it possible to make the diagnosis with considerable accuracy.

The causes of this disease have frequently been said to be limited to gonorrhœal infection. This is an error. It does arise in strumous women from the constant introduction into the uterus of instruments, whether by reason of the introduction of septic matter, or from mechanical violence, I am not sure. But it is more than probable that it arises from the introduction of septic matter. The entire gynecological practice of some seems to be limited to a single procedure, viz.: the introduction of the uterine sound; and the *rationale* of the treatment is explained to the patient thus: "There are adhesions between your womb and bladder, or womb and rectum, and these must be broken up." Or: "You have got a tumor in your womb,

and it will be removed by making pressure on it in this way."

I have just now under my care four striking examples of this treatment persisted in to the production of salpingitis, unilateral, in one; chronic cellulitis and fixation in retroversion of the uterus in another; chronic invalidism in a third; and the fourth case was absolutely free from all disease, but had been gouged regularly for a supposed fibroid which never existed. The constant poking at the interior of a uterus with sounds will frequently produce an inflammatory condition of the lining membrane of the uterus and tubes as well as a general pelvic cellulitis. The older I grow, and the more experience I get, the more am I convinced that local treatment directed to the interior of the uterus instead of to the surrounding structures is entirely too much practised. I find scarcely any use of late years for the old Simpson's sound, sponge or laminaria tents; they lie about as relics of the past. Symptoms are no longer treated for diseases, and the uterine cavity is no longer made a chemical laboratory. The condition of the pelvic and abdominal viscera receives more attention, and less local treatment is required. Tonics, massage, rest, hot water, regulation of the bowels, a good diet, and an occasional application of iodine to the vault of the vagina will soon do away with a host of cases formerly treated with text-book punctiliousness. The cases requiring surgical treatment receive it promptly and with the loss only of enough time to prepare the case. I am sure that such a course is productive of less harm and of more good than the other.

An acute salpingitis recognized as a peri-uterine inflammation should be treated on the well established principles laid down by all authors.

The existence of chronic salpingitis is not always easy of recognition. Mr. Lawson Tait said to me in 1882, at his clinic in Birmingham, England, "Please examine that woman." I did so. He said, "What is that?" I replied "a case of chronic cellulitis." "No," said he, "it is a case of salpingitis, pus in the tubes." I now for the first time knew that I had seen the disease before and had not recognized it. I have seen many cases since, some operated upon by Mr. Tait, and I do not yet feel competent to always recognize the condition. When the symptoms are well marked, and the patient is a married woman or a prostitute, it is easier to recognize it than when the patient is unmarried and above all suspicion—because *sexual intercourse in chronic salpingitis is well-nigh unendurable*. Occasionally the muco-pus or pus and serum will escape from the tubes through the uterus and relief follows; if the tube fills again the suffering returns. I have seen this occur. Bimanual palpation will reveal a fulness on one or both sides of the pelvis. This fulness or swelling is not solid and painless, but semi-elastic and painful. The swelling may be well off on the sides or be directly behind the uterus itself. Other structures than the distended tubes are likely to be involved in the swelling, and if adhesions have formed the mass is fixed.

Pain, reflex in character, is usually complained of in one or both groins, in the back, in the bladder or down the legs. Frequent attacks of pelvic peritonitis occur, lasting eight or ten days. During these the patient cannot walk about without much suffering, and there is an acceleration of pulse and temperature. Pressure bimanually produces a feeling of faintness, and occasionally reflex nervous phenomena approaching hysteria are present. The patients lack color, and bear the evidence in their faces of suffering. One patient often complained of being "so stiff as to be scarcely able to walk." In all of my own cases I have observed that the menstrual flow was disturbed, being profuse and lasting beyond the time, and finishing up with a leucorrhœal discharge sufficient to annoy the patients. In one of them the tube was now and then emptied through the uterus. There was no mistake about this, for I finally removed the tube when it was full of pus. The case was a very interesting one. Twice I postponed operating on account of a subsidence of the mass in the pelvis. The patient insisted that she had for several days observed a flow of matter from the vagina. Finally I was called to see her when she was confined to bed with a severe menorrhagia, and I felt the mass unusually large, tense and painful. As soon as I got her cleared up she entered my private hospital and I operated upon her.

Miss ——— has a strumous constitution; pain in right groin and back; stiffness of thighs; is pale, tongue is heavily furred, is slightly hysterical, has menorrhagia. On local examination, a semi-elastic, painful swelling exists in the pelvis to the right of the uterus. It has come and disappeared, to my personal knowledge, several times in the last six months. In a good light, under Sims's speculum, a little pus is found oozing from the external os uteri. On January 9 she was put on the operating table, etherized by my head nurse, and, Dr. Stone assisting me, I opened her abdomen by a two and a half inch incision, and removed her right ovary and Fallopian tube; the latter full of pus. Her temperature never exceeded 99.5° F. after operation, was normal on the fourth day, and remained so; wound healed, as all my abdominal wounds do, by first intention.

It may be interesting to some to know that no carbolic acid or other chemical touched this patient until the wound was closed, when iodoform gauze was placed over it. The sutures were boiled in clear water, boiling water was poured over the instruments, and boiled water was used for sponges.

## MEDICAL PROGRESS.

Exploration of the Uterine Cavity in Cases of Menorrhagia.—At the meeting of the British Gynæcological Society on December 9, Dr. Arthur W. Edis read a paper on this subject. The author desired to draw attention to the urgent necessity of this proceeding, when dealing with cases of severe persistent or recurrent uterine hæmorrhage. The subject was one of great interest, and often one of great anxiety to the practitioner. There was a tendency to treat metrorrhagia as if it were a special

disease, in place of regarding it merely as a symptom of many and various conditions. A correct diagnosis was the first and most important element of successful treatment, which otherwise was mere guess-work. Speaking generally, there was almost invariably some local cause when the hæmorrhage was really severe. Cardiac, hepatic, or renal disease might be present as a complication, or independently, and should always be taken into consideration. Uterine hæmorrhage might be aggravated by the injudicious use of alcoholic stimulants; more especially was this the case about the time of the menopause. The author had repeatedly witnessed cases where the mere abstention from alcohol had been sufficient to arrest a profuse hæmorrhage, which had been going on for months, and threatened even the patient's life. In attempting to form a rational diagnosis, it was of great importance to get a careful and exact history of the details of the case. Before proceeding to local investigation, the heart, lungs, liver, and other organs, should be carefully examined, and inquiry made into the habits of the patient. A careful pelvic exploration should follow. Then, if after consideration of all the facts of the case, the presumption were, everything else being excluded, that there was some intra-uterine complication, the practitioner was not justified in allowing the patient to go on bleeding indefinitely without giving her the benefit of further assistance. The author, in general, effected dilatation by dividing the cervix with the metrotome or scissors, either alone, or in conjunction with the employment of tents or other dilators. It was advisable, after operation, to irrigate with some appropriate antiseptic lotion, morning and evening, for a few days. In cases of persistent hæmorrhage, due to retention of the placenta, following a miscarriage, the cervix generally remained sufficiently patulous, or was so readily dilatable, that no difficulty was experienced. Where, however, only a small portion of the placenta had been retained, and the case allowed to go on for several successive weeks or even months, the cervix might be found so contracted, as to necessitate the introduction of laminaria tents over night. In such cases, incision should never be resorted to, this method being reserved exclusively for cases of small fibroid or fibroid polypi in the interior of the uterus. The author related several interesting cases to exemplify his meaning, and to show that, until the cavity of the uterus had been explored, a correct opinion could not be formed as to what method of treatment should be adopted. He would lay stress upon the importance of dilating the cervix and exploring the interior of the uterus in all cases where hæmorrhage from the organ persisted unnaturally, and where the ordinary medicinal agents failed in affording relief, and there was no evidence of any condition external to the uterus sufficient to explain the persistence of hæmorrhage.—DR AVELING had observed that in cases requiring dilatation where something existed in the uterus capable of being removed, the cervical canal was either dilated or dilatable; this peculiarity had been noticed by Harvey. In these cases, he preferred to use his own dilators. Where the os was rigid and contracted, a more gradual method was better.—DR. ROUTH believed that Dr. Edis's paper was eminently practical, but he took exception to one or two points. As to rapid dilatation, of the uterus, it did not always succeed when the uterus was rigid; and after all it was not a rapid, but a long and tedious process requiring an anæsthetic. He preferred the sea-tangle-tents used with proper precautions, and always collected and prepared his own. In regard to those cases of metrorrhagia in which nothing could be found after exploration, it should be remembered that an ulcerated or excoriated condition of the mucous membrane need not be restricted to the os or external portion of the cervix, but might extend up the uterine cavity. It was quite in keeping to suppose that a congested state of the liver would have the same effect on the uterine mucous membrane as was the case in piles, causing them to bleed and enlarge. The last objection he could take was to the incision of the cervix. The danger to the patient from septic poisoning was greatly increased by such a measure.

DR. BARNES thought no law in therapeutics more clear than that which dictated direct examination of an organ at fault if it could be effected. The endeavor to do so was made, in the case of other organs, by percussion and auscultation. The uterus offered the incontestable advantage of being directly accessible. A narrow condition of the os externum was a frequent factor in cases of hæmorrhage. Great benefit was often derived from simply enlarging this opening by a strictly limited incision. The immediate effect was to relieve local engorgement. It also afforded a ready escape for imprisoned blood-clots and mucus, and gave free access for exploration and the application of topical remedies. It was also useful in many cases of intra-uterine polypus and fibro-myoma of the body of the uterus.—DR. THOMAS SAVAGE found Hegar's dilators to be very unsatisfactory. Laminaria tents were much more efficient, but were sometimes followed by disastrous consequences. In several cases in which he had suspected a portion of the ovum to be left behind, he had thoroughly swabbed out the uterine cavity with pure carbolic acid, and found that such a course would often prove sufficient for cure.—DR. BANTOCK was compelled to dissent from Dr. Edis on one or two minor matters. He did not approve of incising the internal os after partial dilatation, for the purpose of removing a small fibroid tumor, because it would be impossible to control the subsequent extension of the laceration of the divided tissues consequent on the forcible extraction of such a hard body as a fibroid tumor. He had met with cases exactly corresponding by those narrated by Dr. Edis, and it was quite easy for him to support his views. He thought it was a mistake to mix glycerine with iodine or carbolic acid when the full effects of either remedy were desired, for in both instances the caustic effect was in this way reduced to a minimum, if not wholly removed. Especially was this the case with carbolic acid. He was not prepared to assent to the doctrine that a cervix which was the subject of even extensive disease of a non-malignant character, but the result of chronic catarrh, etc., should not be subjected to dilatation. These were just the cases in which he obtained the most satisfactory results from dilatation

and the subsequent daily introduction of a stripe of lint saturated with glycerine for ten to fourteen days. —Mr. Lawson Tait considered the use of spongetents to be, of all the methods of dilatation, the most dangerous, and had long since given them up. Hegar's dilators he considered extremely risky, and their employment was as exhausting for the operator as for the patient.—*British Medical Journal*, Jan. 16, 1886.

Palpation of the Pelvic Organs.—Dr. B. S. Schultze, of Jena, has recently published (*Centralbl. für Gynäk.*, Oct. 24), an original communication on bimanual palpation of the pelvic viscera. He had already noted ("Ueber Palpation der Becken," *Jen. Zeitschr. für Med. und Naturw.*, 1870, v., p. 113) that the contracting and relaxing psoas muscle, along the brim of the pelvis, was an excellent guide to the fingers engaged in detecting the position of the ovary in the bimanual method. External pressure along the same part of this muscle will often, in cases of chronic oöphoritis, or complicated parametritis, cause severe pain, especially when the hand passes over the ovarian vessels and nerves as they cross over the pelvic brim. [*See* reporter's note below, with regard to pressure on the obturator nerve.] When the psoas is kept in a state of clonic spasm, through apprehension of pain or through faulty position of the lower extremities, it may readily be taken for a swelling, the result of pelvic inflammation. As long as the psoas remains relaxed it cannot readily be distinguished by the hand placed upon the iliac fossa, but the pelvic brim can be felt through it. When, however, the patient bends her thigh, the brim cannot be felt through the contracting muscle, which becomes very evident to the touch, and is distinctly tender.

Dr. Schultze finds that two muscles are to be detected on careful vaginal palpation, and to be taken into account as valuable guides to other structures. These are the obturator internus and the pyriformis. [The sphincter vaginæ and levator ani are easy to detect. The anterior part of the latter, when in active contraction, is often mistaken for the former, which lies below it, separated sometimes by a distinct groove. The tendinous arch, whence part of the levator ani takes its origin, can be felt under the lateral part of the vagina; and, by passing the finger forwards towards the anterior bony origin of the muscle, behind the body of the os pubis, the obturator gland can be detected if it be enlarged or inflamed, as in some cases of pelvis cellulitis and gonorrhœa. Vaginismus is very frequently, we find, caused by painful contraction of the levatores ani in cases of fissure of the anus or inflamed hæmorrhoids.—*Rep.*] The obturator internus, Dr. Schultze states, is a muscle generally well developed, and its movements can be felt through the vaginal walls if the patient rotate the corresponding leg outwards. Its contraction becomes particularly evident during extension and adduction of the thigh, when not only its origin around the obturator foramen can be defined, but also the portion lying further back towards the sciatic notch. Pressure on the contracting muscle seldom causes pain, but pressure on the obturator nerve produces sharp crampy pains, radiating to the thigh along the course of the nerve. [This, if misunderstood, may be taken to be symptomatic of some acute inflammatory process in the pelvic cavity. A thorough exploration of the vagina with the finger, in a case of suspected uterine disease, is very likely to involve pressure on the nerve, and this may become a source of fallacy. Pressure on the ovarian plexus must also cause pain even in health, and thus the tenderness is not necessarily a proof (*vide supra*) of chronic oöphoritis.—*Rep.*].

The pyriformis is difficult to detect by vaginal palpation in subjects where the vagina is long, and the pelvis deep. It can easily be touched when the pelvis is shallow and the vagina broad, or in women of diminutive proportions. When the uterus is high up, as in advanced pregnancy, the finger can easily reach the upper border of the muscle. The pyriformis is, according to the evidence of palpation, very irregularly developed in different patients, and it is not so evidently set in action as the obturator, during active rotation outwards of the lower extremity. On the other hand, in many cases it remains in continual contraction, especially when the patient lies in an uncomfortable position, or is in a state of alarm. Pressure on the contracting pyriformis is often intensely painful, possibly, ("vielleicht," *evidently*, might be said with full confidence.—*Rep.*) through transmission of the pressure to the sacral plexus. Through these peculiarities the pyriformis may become a prominent source of fallacy. Dr. Schultze, a few years ago, examined a very corpulent patient suffering from chronic metritis and parametritis. He took the two contracted pyriformes for the ovaries fixed to the back of the pelvis.

When both the pyriformes and the obturatores interni are set in action, the bulging of the obturators is most prominent a little behind the middle point of the foramen ovale. As each obturator bulges but little, there is not much chance of its being taken for a tumor or a collection of inflammatory deposit. The most projecting part of the pyriformis in full contraction is much more evident to the touch; it stands out three quarters of an inch or more from the anterior surface of the sacrum. The inner borders of the two pyriformes in full contraction lie over an inch apart, so that two fingers can be pushed between them in vaginal palpation. The separate bands of fibres can be detected as they arise from the sacrum between the sacral nerves, provided that the muscle be set in action whilst the finger presses in the right direction. If the patient, lying in an easy attitude, have rotated the lower extremity outwards without setting the pyriformes in action, she should be told to hold the thigh stiff. This will set all the femoral muscles in action, and the pyriformes may then be distinctly felt. This will be sufficient to distinguish the muscles in question from a morbid growth or deposit.—*London Medical Record*, January 15, 1886.

Nutrient Suppositories.—A case was related by Mr. Godlee, for himself and Dr. Barlow, at the last meeting of the Clinical Society, in which the advantage to be derived from nutrient suppositories was well

exhibited. The patient, as will be seen from a perusal of our report of the meeting, suffered from typhlitis. Mr. Godlee opened the abscess-cavity, and allowed a large quantity of fœtid pus to escape. The patient eventually quite recovered, without any palpable evidence of the thick bands of inflammatory material which are so troublesome in many cases treated on expectant methods, and had since had no sign in any way of any trouble whatsoever about the cæcum. Dr. Barlow, speaking of the diatetic treatment after the operation, remarked "that in this case it was especially desirable to keep the stomach and intestinal tract at absolute rest. For many days, therefore, the very minimum of food, namely, a little barley-water, was given by the stomach, and the patient was fed by the rectum. The thirst was found to be entirely relieved by enemata of three-quarters of a pint of water, which were in all cases absorbed. With regard to rectal alimentation, it is often observed that after two or three days the rectum becomes intolerant of nutrient enemata. To avoid this, food was given in form of digestive suppositories. Of these, two very convenient forms were made. The first was made by diluting a good meat-extract with water, and peptonizing it with Bullock's pepsin, neutralizing, and then concentrating, to a soft paste. Cacao-butter was then added in fine shavings, and intimately mixed with one-third of its weight of the peptonized meat-extract, and rolled into cones weighing 100 grains. The second was made by peptonizing milk with pancreatic solution, boiling and concentrating to a paste, mixing and dividing as in the first case. Peptonized milk being now sold in a concentrated form, it may be used instead of ordinary milk, which saves much time and trouble. The suppositories were certainly absorbed, and kept the patient going for several days. One was introduced about every three hours. His tongue became very dry, after a time he was given some pieces of underdone chop, which he was allowed to chew and to swallow the juice derived therefrom, but not the fibre. Besides maintaining his nutrition fairly, the patient, who was rather an irritable, querulous subject, was satisfied and comfortable, and the advantage in keeping his abdomen quite quiescent was very great indeed." If other cases should confirm the favorable impression as to the advantages to be derived from this method of feeding, when contrasted with the failure which in a few days generally results from the attempt to sustain life by nutrient enemata, as the rectum generally soon becomes intolerant of them, there will doubtless be found a wide use for these suppositories in the very large class of cases in which the stomach requires to be kept at rest. Those who employ them may find, too, that the liquid which the system requires daily may be in some cases administered by the stomach; this would, one might suppose, tend still less to the disturbance of the lower bowel, and leave it still more at rest to digest and absorb the suppositories alone. — *British Medical Journal*, December 19, 1885.

TRANSPLANTATION OF BONE.—DR. FERRARI, (*El Siglo Medico*, Nov. 22, 1885,) arrives at the following conclusions: 1. Pieces of bone inserted in the diaphyses of long bones may become completely united to them, and continue to live. 2. They not only continue to live, but also grow. 3. The insertion of bone gives results in whatever position the piece of bone is applied. 4. The re-union or grafting takes place by a true vascularisation, which forms between the piece inserted and that to which it is applied. 5. Around the piece inserted, a bony, periosteal, and medullary callus is formed. 6. As in a fracture, this callus has only a temporary vitality. 7. After the lapse of a certain time, the periosteal and medullary callus is reabsorbed, and the engrafted bone is only to be recognized by its greater vascularity. 8. The grafting takes place whether the piece inserted be completely adapted to the margin of the wounded bone or not; but in the latter case a longer time is required for union. 9. For successful insertion a rigorous antisepsis is necessary. 10. A favorable result is obtained even when the smallest pieces are inserted. 11. In the case of insertion of small pieces of bone, if partial suppuration of the wound occur, some small pieces may yet adhere if the suppuration do not extend to the parts of the bone inserted which touch the medulla. 12. For the complete success of the insertion, apart from antiseptic medication, moderate pressure must be employed to maintain contact between the medulla and the piece of bone transplanted. — *London Medical Record*, January 15, 1886.

ALBUMINOMETRY AND ESBACH'S TUBES.—MR. J. A. BLOMFIELD says that the usual method for the quantitative determination of albumen in the urine in the course of clinical work must be regarded as unsatisfactory. It consists generally in boiling a test-tube about half filled with the urine, allowing the coagulated albumen to subside, and then getting by sight a rough estimate of the proportion of the albumen to the amount of urine employed. There is a method used in many of the French hospitals which yields results possessed of numeric accuracy, and which serves to give a good idea of the actual amount of albumen in the urine. The method was devised by Dr. Esbach, and consists in the precipitation of the albumen by means of picric acid. After standing twenty-four hours, the precipitated albumen reaches a certain height in the tube, and it is according to height to which it reaches that the amount of albumen is determined. The tube is empirically graduated in such a way that the number to which the precipitate reaches gives directly the grammes of albumen per litre of urine. The reagent for precipitation is made by dissolving 10 grammes of picric acid and 20 grammes of citric acid in 800 or 900 c.c. of boiling water, and then adding sufficient water to make one litre. Urine is poured into the test-tube up to a certain mark, the reagent added up to another mark, and then the tube is inverted about a dozen times to mingle well the contents, and placed in the vertical position for twenty-four hours, when the height to which the subsided precipitate has reached gives the grammes of albumen per litre.— *The Lancet*, Jan. 23, 1886.

THE
Journal of the American Medical Association.
PUBLISHED WEEKLY.

THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

SUBSCRIPTION PRICE, INCLUDING POSTAGE.

PER ANNUM, IN ADVANCE.....$5.00
SINGLE COPIES.....10 CENTS.

Subscriptions may begin at any time. The safest mode of remittance is by bank check or postal money order, drawn to the order of the undersigned. When neither is accessible, remittances may be made at the risk of the publishers, by forwarding in REGISTERED letters.

Address
JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION,
No. 63 RANDOLPH STREET,
CHICAGO, ILLINOIS.

SATURDAY, FEBRUARY 13, 1886.

## "OPERATIVE SURGERY OF THE BRAIN."

Such is the title of a most exhaustive paper read by DR. JOHN B. ROBERTS, of Philadelphia, before the last meeting of the American Surgical Association. The paper, which has been printed in book form, makes an octavo volume of eighty pages, and is divided into three chapters, which deal respectively with the "Principles of Cerebral Surgery," "Cerebral Localization," and the "Operative Treatment of Cerebral Lesions."

The consideration of the principles of cerebral surgery is taken up under a number of propositions, the first of which is that "the complexus of symptoms called 'compression of the brain,' is due not so much to displacing pressure exerted on the brain substance as it is to some form or degree of intracranial inflammation." We must agree with the author that too much has been made of "compression of the brain," and to a great extent with Hutchinson in saying that "compression of the brain from depressed fragments of bone is an imaginary condition." Dr. Roberts thinks that it would be well if traumatic "compression of the brain" were always translated "inflammation of the brain," and if the profession were taught to believe that it was due to irritation of the periphery of the brain from traumatic causes. The second proposition is that "The conversion of a closed (simple) fracture of the cranium into an open (compound) fracture by incision of the scalp is, with the improved methods of treating wounds, attended with very little risk of life." It must surely be admitted that so long as the cranial fracture is closed the surgeon must be to a great extent in the dark as to its precise character; and it is in this respect that a simple fracture of the cranium differs from every other fracture. "Uncertainty as to the character of a cranial lesion is more dangerous to health and life than the conversion of a closed into an open fracture of the skull, because observation has taught the profession that open cranial fractures do not resemble in fatality similar open fractures of long bones." This argument finds strong support in the fourth proposition, that in the majority of cranial fractures the inner table is more extensively shattered and splintered than the outer. The question, then, resolves itself into one of correct diagnosis. We must learn the character of the lesion, and then we are in a position to apply the surgical expedients necessary; and since the day of antiseptic surgery restoration to health is more probable than improbable even with the complication due to the incision.

The third proposition is that "The removal of portions of the cranium by the trephine or other cutting is, if properly done, attended with but little more risk to life than amputation of a finger through the metacarpal bone." Of the 115 cases of trephining collected by Amidon there were only four deaths which could be attributed to the operation. Dr. Briggs has probably performed the operation as often as any man in America, and it is his opinion that it is one of the safest of the capital operations. The risk would be still further diminished, probably, if surgeons were to confine themselves to the conical trephine or the burr of the dental engine, and throw away the mallet and chisel. We have already said that the fourth proposition is that the inner table is usually more extensively shattered and splintered than the outer table. This has been shown by experimental fractures produced in the dissecting-room and by observation of cases in private practice; and it is simply in accordance with a well-known mechanical law. It is easily seen, then, that the great danger is from inflammation set up by the depressed fragments of bone, and not from compression. As regards the fifth proposition, that "perforation of the cranium is to be adopted as an exploratory measure almost as often as it is demanded for therapeutic reasons," there must necessarily be much difference of opinion; but as in the case of laparotomy for diagnosis if the surgeon cannot see his way without perforating the cranium the surgical reasons seem to be on the side of exploration. The risks of obscure knowledge are usually greater than those of divided scalp and perforated bone; and the earlier the exploration the less the risks. Comment upon the sixth proposition, that "Drainage is more essential in

wounds of the brain than in wounds of other structures," seem scarcely necessary, since, in view of recent papers and cases, the proposition seems almost self-evident, as does the seventh, that "Many regions of the cerebral hemispheres of man may be incised with comparative impunity." We are sure also that those who have read the reports of the cases of Bull, Parkes, Hopkins Sands, Brinton and Nancrede will agree that "Accidental or operative injuries to the cerebral membranes, meningeal arteries or venous sinuses, should be treated as are similar lesions of similar structures in other localities." And as regards the ninth and last proposition, that "The results of cerebral localization are more necessary to the conscientious surgeon than to the neurologist," very little consideration will show that it is true, and that as a rule surgeons do not pay sufficient attention to the subject. When the neurologist is wanted to give an opinion in the matter the necessity is not so pressing that one or two days will make much difference; but with the surgeon the opinion must be formed immediately. An operation is or is not necessary, and if necessary it should be done at once. And for those who desire to make a study of this subject, we do not know where a better account of it can be found than in the second chapter of the valuable monograph under consideration.

Passing over the second chapter, which deals exclusively with cerebral localization and contains tables of "indications in traumatic cases," of "contra-indications," of "points for opening the cranium when operation is indicated," and of "more uncertain localizations," we may now consider the third chapter— "Operative Treatment of Cerebral Lesions"— in which the principles laid down in the first chapter are applied to the treatment of (a) cranial fractures; (b) intracranial hæmorrhage; (c) intracranial suppuration; (d) epilepsy and (e) insanity following cranial injury; and (f) cerebral tumor. In discussing the treatment of cranial fractures Dr. Roberts asks four questions: 1. What conditions demand incision of the scalp? 2. What conditions render incision of the scalp unjustifiable? 3. What conditions demand perforation of the skull? 4. What conditions render perforation unjustifiable? These questions are answered in a tabulated statement. In cases of *closed fissured fractures* he would not operate if there be no evident depression and no brain symptoms; but he would incise the scalp and trephine with brain symptoms with or without evident depression. With evident depression and no brain symptoms he would incise the scalp and possibly trephine. He would be inclined to trephine if the depression was marked, or the fissures sufficiently multiple to approach the character of a comminuted fracture. In cases of *closed comminuted fractures* he would trephine with evident depression with or without brain symptoms, and with brain symptoms without evident depression. With no evident depression and no brain symptoms he would incise and probably trephine. (He would trephine unless the comminution was inconsiderable).

With *open fissured fractures* he would trephine with brain symptoms with or without evident depression; with neither evident depression nor brain symptoms no operation should be performed; while with evident depression and no brain symptoms he would possibly trephine. (He would be inclined to trephine if the depression was marked, or the fissures sufficiently multiple to approach the character of a comminuted fracture). In cases of *open comminuted fractures* he would trephine except when there is neither evident depression nor brain symptoms, when the operation would be performed unless the comminution was inconsiderable. Punctured and gunshot fractures always demand operation. It should be remembered that when operations for fractures of the skull are demanded they should be performed immediately or within a few hours. The risk to life is enormously increased by waiting to see if the patient may not get along very well without an operation. But whether the operation be performed or not all cases, says Dr. Roberts, should be treated as cases of incipient inflammation of the brain (meninges?)

When is perforation of the skull, in order to remove a clot and secure bleeding vessels, justifiable? An operation says our author, is contra-indicated in cases of intracranial bleeding that do not present the symptoms which are believed to be produced by accumulation of blood in either the cavity of the arachnoid or the space between the skull and the dura mater. If localized hæmorrhage within the arachnoid be reasonably ascertained, he considers trephining justifiable. When the disc of bone has been removed the bluish and non-pulsatile dura will probably bulge into the opening, and should be incised to allow the blood to escape. In some cases, however, this bulging will not occur until many hours after the injury. Gradually increasing brain symptoms, after injury to the head, "especially if there has been a period of return to consciousness after shock of traumatism, suggest the occurrence of intracranial bleeding from meningeal vessels," even should no fracture or depression of bone be detected. Operation is especially indicated if the localizing symptoms point to no other region of the cortex and if the symptoms are such as render cerebral laceration improbable. "A very short

interval of immunity (from head symptoms after traumatism) indicates rapidly flowing hæmorrhage and demands early operation, with probable ligation of the middle meningeal artery or one of its large branches, or ligation or compression of a sinus. It must be remembered also that compression symptoms, coming on immediately or quite soon after depressed cranial fracture, are very often due to the subcranial clot rather than the depressed cone. Removal or elevation of bone is often needed more for liberation of blood-clot and control of hæmorrhage than for deformity in the bony outline."

Mr. Charters Symonds reported a very interesting case of laceration of the middle meningeal artery before the Clinical Society of London, on October 9. The patient fell on his head, and soon became completely insensible. Mr. Symonds trephined on account of hemiplegia and deepening coma. A pulsating clot was removed, and hæmorrhage was profuse. In order to reach the laceration a great deal of bone was removed. Two lacerations of the vessel were found, one of which was closed by overrunning the vessel with fine gut, and the other by dividing the vessel and twisting both ends. Hæmorrhage still continued, and was arrested after the bone had been incised to the base, by under-running the artery with a piece of dura mater, making traction on the ligature carried out of the wound, and by carrying a pair of torsion forceps down as far as possible and giving half a twist. The patient died fifty hours after the accident, but death could not be attributed to the operation.

Of the treatment of intracranial suppuration we can only say that if the surgeon can locate the seat of suppuration he should operate and evacuate the pus; if he cannot locate it he should hunt for it, taking care that the aspirating needle be not thrust too deeply towards the medulla and base of the brain. The case reported by Nancrede to the American Surgical Association, in 1884, shows that it is never to late to seek for pus. Of Dr. Robert's remarks on trephining for epilepsy, insanity and cerebral tumors want of space prevents our saying anything. We set out with the intention of calling attention to the more noticeable features of his exceedingly valuable and masterly monograph, and have exceeded our limits. He is to be congratulated that he has been able to compress so much information, and so much good surgical reasoning into so small a book—for it is one to be studied, and studied hard by everyone who may possibly have to deal with an injury of the skull or brain; and we must regard the operation as both justifiable and demanded.

## HYPODERMATIC MEDICATION.

It is thirty years since Dr. Alexander Wood, of Edinburgh, introduced to the medical profession the subcutaneous method of administering remedies. The entire following of Æsculapius may be said to be armed with hypodermic syringes. Yet it is doubtful if the average practitioner, as a rule, uses this instrument for the administration of anything except morphine. Again, it is probably safe to assume that too great recklessness is often shown in the use of this mode of giving this remedy. It is not always easy to substantiate the suspicion that a patient has succumbed to an overdose of morphine thrown under the skin, whereas it is a very easy thing to entertain and even express such a suspicion. This is shown by the frequency with which the laity whispers the account of some case in which Dr. ——— gave Mrs. ——— a dose of morphine hypodermatically, when she went into a heavy sleep and never awoke. Doubtless many of such instances are examples of *post hoc, propter hoc*. Yet it is only too true that some of the patients thus treated have been sacrificed. However exceptional death from the subcutaneous administration of morphine may be, the mere fact that such an untoward result is possible should lead physicians to err, if err they must, on the side of caution.

The subject of "Hypodermic or Subcutaneous Medication" was discussed at the fifty-third annual meeting of the British Medical Association, at Cardiff, last year. As the two questions, concerning the range of its employment and the extremes of the doses regarded as safe, were considered, it may be well to give the readers of THE JOURNAL a summary of the ideas there presented. The discussion was opened by Dr. Talfourd Jones in the Section of Pharmacology and Therapeutics. He would not limit hypodermatic medication to morphine by any means, but would recommend all practitioners to carry appropriate solutions of atropine, apomorphine, and a combined solution of morphia and atropine in the proportion of twenty to one. There can be no doubt that given subcutaneously, morphine acts more promptly, certainly, and with fewer disagreeable after-effects than by the stomach. Moreover, its effect is not merely a general one, but in addition it exerts a local anodyne power, which is marked and often of great service.

In this respect Talfourd Jones is a disciple of Alexander Wood, not of Hunter. He believes that in curing neuralgiæ, such as sciatica, brachialgia, trigeminal neuralgia, etc., it is far more efficacious to inject the narcotic at or near the seat of pain than

at some remote part. He cites cases in support of this position of which space forbids the repetition here. He is of the opinion that there should be a definite and uniform dosage established for this powerful agent. Lawson thought the initial dose should be $\frac{1}{16}$ of a grain, but Jones has seen very alarming effects follow that amount. There are many conditions that must govern the size of the dose in each individual case, such as the bodily weight, the age, idiosyncrasy, and the intensity of the pain or gravity of the condition which calls for the hypodermatic use of the remedy. He would suggest that for an adult female the initial dose of morphine by this method should be $\frac{1}{10}$ gr., while for a grown male $\frac{1}{8}$ might be employed. He would never give morphine subcutaneously to children, if possible to avoid it, while to one under the age of 5 years it is never admissible.

Jones employs and earnestly recommends a solution of the acetate of definite known strength. For sixteen years he has used a solution always made in the same way and of the same strength. The salt used should be fresh. "Procure a stoppered bottle that holds exactly one fluid ounce. Half fill this with water, which I never use distilled, then put into the bottle 40 grains of acetate of morphine and drop into it exactly 4 minims of acetic acid. Shake and the salt will instantly dissolve. Then fill the bottle with water. The resulting solution will be pale and clear. Such a solution, if properly kept, will not in six months throw down more than a fraction of a grain of the acetate. It will perhaps become darker in color, but this is immaterial." It should be kept away from the light. It is much stronger than the solutions commonly employed in this country, 12 minims representing 1 grain of the drug. Great care has to be taken in the measurement of so strong a solution, and unless syringes are used the pistons of which are provided with a nut, there would seem to be a greater likelihood of accidents. Moreover, the acetate is said to contain 10 per cent. more morphine than does the sulphate.

The reader next considered atropia. He advised its employment hypodermatically often because of its unrivaled power over muscular spasm, as in hepatic, renal and intestinal colic. It is used as an anodyne and antispasmodic, as an anhydrotic, as a respiratory and cardiac stimulant and as an antidote to opium narcosis. He advised a solution of the strength of 2 grains to the ounce of water, and of this the dose is from 1 to 6 minims. Having considered and recommended these remedies separately, he yet desired to endorse most emphatically their combined administration in the proportion of 1 to 20. Indeed, he rarely employs morphine alone, except in certain cases in which it is desirable to lessen the vigor of the respiration. In painful thoracic diseases, as pleurisy, it is well to leave out the atropine, since its stimulation of the respiratory act would be likely to aggravate the suffering.

In other cases he would use the combined solution, on account of its certainly modifying the unpleasant after-effects of morphine. Before leaving the subject of these agents he would emphatically recommend the hypodermatic use of moderate doses of this "atropho-morphine," as he dubbed their combined solution, in attacks of cardiac asthma. These attacks, which are paroxysmal and occur chiefly at night, are most quickly and beautifully relieved by this means. The effect is to stimulate and not depress the already weakened and overburdened heart. This is no new idea, yet it is so certain and valuable an addition to a practitioner's therapeutic knowledge that we are glad to have Talfourd Jones give it his endorsement.

Lastly, he would urge the hypodermatic use of apomorphine. It is a prompt and safe emetic, specially serviceable in cases of poisoning and alcoholic intoxication. A convenient solution of the hydrochlorate can be made of the strength of one per cent., and of this the dose for an adult should be from 4 to 10 minims; that is, from the twenty-fifth to the tenth of a grain. The $\frac{1}{20}$ will produce emesis in from three to five minutes. For children 1 to $2\frac{1}{2}$ minims should be employed. Still, he thinks it preferable to administer it to young children by the stomach. It should be remembered, however, that apomorphine acts very slowly when given in this way, since its action must depend upon its being absorbed.

As regards the needles employed, Jones is of the opinion that they are best made of steel, since they penetrate more easily and with less pain than those made of silver. Except when intended to reach deep tissues, their length should be from three-fourths of an inch to one inch. Such needles are easily cleaned and not likely to bend or break. Other practical points touched upon it is not best to mention here, as they are such as would naturally suggest themselves to any practical man.

In conclusion it may be said that there are several other remedies, such as pilocarpine, which are usefully given subcutaneously, and which it is advisable to have at hand. German therapeutists are very fond of administering the bichloride of mercury hypodermatically for the treatment of syphilis. This method was introduced by Lewin, and is very efficacious when it is desirable to bring the system rapidly under

the influence of the drug. The dose is from 1/6 to the 1/8 of a grain. It is combined with 1/16 grain of morphine, and a small amount of sodium chloride, dissolved in 15 minims of water and injected beneath the skin of the back. This mode of treatment has the endorsement of high authority. Hypodermatic medication possesses many advantages and ought to receive greater attention on the part of the general practitioner.

It is somewhat remarkable that so few physicians heat the solution for subcutaneous injection. The amount to be injected may be put into a teaspoon, and a lighted match held under it until it boils. By the time the fluid is taken into the syringe and the needle screwed on it will usually be sufficiently cooled to inject. We are confident that many cases of abscess and sore arm would be avoided by taking this little trouble, especially when the more irritating preparations are used. And when the solution is made on the spot boiling the water ensures solubility, and often precludes the necessity of the addition of an acid as a solvent. It is often the case that nervous patients will contract the muscles of the arm into which the injection is to be made, and the injection is thus often made into a muscle. This may cause an abscess. Lastly, injections should be made, if possible, in a region comparatively free from superficial blood-vessels, and where there is a large amount of areolar tissue.

## TREATMENT OF CARBUNCLE WITHOUT INCISIONS.

At the annual meeting of the American Medical Association, in May, 1885, Dr. L. D. Bulkley, of New York, read a paper claiming a good degree of success in the treatment of carbuncles of all grades of severity, without incisions or other surgical procedures. His method consists essentially in the daily dressing of the carbuncle with unirritating and somewhat antiseptic unguents spread on thick soft felt cloth, and the giving of sulphide of calcium internally, and proper diet. In the discussion which followed several of the more experienced members of the Section coincided with Dr. Bulkley.

It was stated by the writer of the paper that free incisions through the diseased structures, by severing blood-vessels, added to the danger of septic poisoning, and thereby doing in some cases positive harm. Since the publication of Dr. Bulkley's paper in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION for May 16, 1885, an article has appeared in *Daniel's Texas Medical Journal*, of November, 1885, by DR. C. H. WILKINSON, of Galveston, giving the results of his experience in the treatment of carbuncles with injections of carbolic acid during the last six or eight years. He fully sustains Dr. Bulkley in the opinion that surgical interferences with carbuncles are worse than useless. We cannot give a better idea of the plan of treatment which Dr. Wilkinson claims to be original with himself, than by copying the following paragraphs from his paper:

"An Italian laborer, æt. 51, applied to me for treatment of a well developed carbuncle situated upon the posterior cervical region, which measured five by six inches and was very irritable. I selected two or three of the most prominent sinuses and injected into each of them about 10 minims of pure carbolic acid, full strength. On the second day after the injection it was noticed that the inflamed areola had nearly disappeared, and the sore itself was casting off several large sloughs. A few more drops of acid were then injected, after which the ill-conditioned, painful and highly inflamed carbuncle was converted into a simple, healthy, granulating ulcer, which healed to complete recovery within a few weeks after. Since the treatment of this patient I have fallen heir to many similar cases; the carbuncle in the great majority of instances being situated on the nucha; and in every instance did a speedy return to health follow the carbolic acid treatment, as carried out in the case of the Italian. My method of employing the agent has been, as just stated, to select a few prominent sinuses and inject into them from five to ten drops of pure liquid carbolic acid, using an ordinary hypodermic, or, better still, a Heaton's hernia syringe, throwing the fluid in the direction of the hard, red and painful spots about the periphery, and being careful to pick up all excess of acid that might ooze back through neighboring sinuses, with sponge or blotting-paper.

"Carbolic acid in this class of cases acts by converting an unhealthy into a healthy inflammation. All erysipelatous tendency is checked instanter, wherever the acid touches, while the stimulus it affords to the capillaries promotes absorbtion on the one hand and healthy granulation on the other. Great sloughs of necrotic, connective tissue are thrown off, and the carbuncle is soon converted into a rapidly-healing simple ulcer. Furthermore, carbolic acid acts as a local anæsthetic in these cases, and did it do no other good than this in these most painful affections we would be amply justified in its employment for this purpose alone."

The plan here suggested is certainly worthy of a fair trial, with proper caution, lest too much of the carbolic acid might enter the circulation.

# SOCIETY PROCEEDINGS.

## CHICAGO MEDICAL SOCIETY.

*Stated Meeting, February 1st, 1886.*

THE PRESIDENT, C. T. PARKES, M.D., IN THE CHAIR.

DR. J. SUYDAM KNOX read a paper entitled

QUINSY AS A RHEUMATISM.

The author reported the treatment of fifty cases of the disease. In forty-five cases (95 per cent.) there was a positive rheumatic diathesis. Forty of these cases were cured in thirty-six to seventy-two hours, without suppuration. The treatment was salicylate of sodium, and hot alkaline gargles, or the repeated insufflation on the tonsils of bicarbonate of soda. Five cases, decidedly rheumatic, were not benefited by similar treatment. Five cases, not rheumatic, were not benefited, and at the end of forty-eight hours the ordinary treatment of quinsy was followed. Only one of these cases did not suppurate. The doctor concludes that a large majority of quinsies are rheumatic inflammations: 1. From the percentage observed. 2. From the success of anti-rheumatic treatment. 3. From the similarity between the symptoms of quinsy and rheumatism.

Dr. KNOX said that wherever possible he used an insufflator and blew bicarbonate of soda directly on the tonsils, using as much as 30 grains, and allowing it to remain on the tonsils as long as possible, to be followed by a gargle of water as hot as could be borne and to be continued until the throat was cleared, which would take from half an hour to two hours. He sometimes used carbolized lime water, with morphia. He said that he could not say as to every case, but that where suppuration takes place it is usually in the gland, an abscess is formed from glandular inflammation and suppuration takes place through the gland.

DR. A. B. STRONG reported

A CASE OF INTUBATION OF THE LARYNX FOR ACUTE CATARRHAL LARYNGITIS, WITH RECOVERY.

He said the patient was a child, æt. 2½ years, delicate and small for her age. She had been sick thirty-six hours when it was decided that intubation was imperatively demanded, and it was done. Instant relief was obtained. The act of introducing a No. 3 tube had caused such an abundant ejection of the mucus, and the breathing was so easy, that the tube was withdrawn, and the child passed the night comfortably. However, at 4 P. M. of the succeeding day the tube was re-introduced with the same success, but about twelve hours after the child caught hold of the thread and withdrew the tube. The No. 2 tube was then placed in position and remained there sixty-eight hours, when recovery was complete. Dr. Strong said intubing the larynx has advantages over tracheotomy in being quickly performed, furnishing instant relief without cutting or bloodshed, being free from danger, and readily assented to by the parents. The care of the patient after operation is slight, as compared with tracheotomy, as the tube does not have to be interfered with, nor does it often clog up. The tubes as now made, those of Dr. O'Dwyer, are not easily coughed up. It is easier to introduce than remove the tube, owing to the fact that if the thread is left in the mouth it causes coughing and difficulty in swallowing. It was observed that during the thirteen hours the child wore the tube with the thread she had more difficulty in swallowing than subsequently when the thread was withdrawn; the thread being drawn across the epiglottis probably interferes with it closing the glottis during deglutition. Besides, the thread requires constant watching lest the child grasp it and withdraw the tube. Still, in case a mass of mucus should lodge against the lower end of the tube and stop respiration, the thread might be the means of saving the child's life by allowing the tube to be speedily withdrawn.

THE PRESIDENT said it was a matter of surprise to him that so small an opening would allow the exit of secretions, as in the case just reported. It had been his experience that recovery always follows cases of catarrhal laryngitis. However, in these cases, he thought the introduction of the tube might be of great benefit in relieving difficult breathing or dyspnœa, and in allaying the fears of friends. He was aware that a very small opening gave air sufficient for inspiration for some hours. He once operated on a boy about 5 years old, in whom the trachea by improper manipulation was turned in some way, and the incision made in the side of the trachea. When the external tracheotomy tube was introduced into the wound the child breathed quite well, the suffusion of the face passed away and the lips became red, but still the sound of the breathing was not satisfactory to the ear. He then tried to introduce the internal tube and found the child had a return of all the symptoms of suffocation. On removing the external tube at the bottom of the wound the trachea was seen unopened. The child recovered. The President said that while the tube was in this bad position he looked into it through the fenestra, and the bottom of the fenestra was an opening through which the smallest probe could be introduced into the trachea, which enabled the child to inspire air enough to relieve the urgent symptoms. He thought that in a case of true diphtheritic laryngitis an opening of the size of the tube under discussion could, in his opinion, not give exit to any such amount of secretion as is frequently seen during an operation. He did not think that intubation of the larynx would take the place of tracheotomy; it no doubt is of great benefit in those cases where the patient is likely to die unless some measure be quickly adopted which will give time enough to allow the operation of tracheotomy. In the case under discussion the tube was worn sixty-eight hours continuously. He had not seen a case of tracheotomy where the closure of the fenestra gave evidence that the trouble with the larynx or glottis was overcome in less than six days. This was the shortest time in which he had been able to remove the tracheotomy tube.

DR. F. E. WAXHAM said that from his experience with intubation of the larynx he was thoroughly convinced of its utility, and its superiority over trache-

otomy. He had eight recoveries out of his first seventeen cases, a result which he claimed could not be approached by tracheotomy, especially in Chicago. The ages of the patients varied from 11 months to 5 years; he considered these eight cases as being saved from certain death, as in only one case would tracheotomy have been permitted by the friends, and he had the corroborative evidence of other physicians as to the impending danger, and the urgent necessity of surgical interference. Since his last report he had had a number of cases, and had performed the operation four times during the last week, one patient being only 11 months old, suffering from both laryngeal and pharyngeal diphtheria; the urgent symptoms were at once relieved. In another case aged 18 months, where death was impending, the tube was introduced without difficulty and the child relieved, and recovery would without doubt have been the result had not the child died of pneumonia on the second day. In another case, one of malignant diphtheria in a child of 2 years, the patient succumbed on the second day after the operation. In another case he found the patient cold and livid, pulseless, and unconscious. After the tube was introduced cold water was dashed on the child's face, and in about five minutes he looked around and asked for his father; took some milk and passed into a quiet sleep. This child died from pneumonia three hours later. Dr. Waxham said that in the eight cases that recovered, in every instance false membrane was observed; when the tube was introduced the membrane was ejected, either in large flakes or broken-down masses. He recommended that in treatment after intubation nothing at all irritating should be given, as when a child takes fluid of any kind a few drops will trickle into the trachea and cause violent coughing, and this irritation will often lead to pneumonia. In a child rugged and strong, bichromide of mercury may be given to hasten disintegration of false membrane. The most remarkable case coming under his observation was a child of 4 years upon the verge of suffocation, when, upon the tube being introduced, a considerable portion of false membrane was thrown out through the tube and the violent symptoms subsided at once. The thread was removed, and the second day after the operation the child was playing about the room and continued about the house during the four days that the tube was worn, and finally made an entire and perfect recovery. Dr. Waxham thought that in regard to the comparative value of tracheotomy and intubation very much might be said. The text-books give as the percentage of recoveries from tracheotomy about one in three, but these statistics are made up from the most favorable reports. If a physician has one recovery out of three or four cases he is justly proud of it and reports the case; on the other hand, if there is one recovery out of fifteen or twenty cases, no report is made. He had known one physician to have operated fifty times with but two recoveries. Dr. Waxham thought that the thread should always be removed, as it is a constant cause of irritation, and that no difficulty need be experienced in removing the tube with extractors. He thought intubation had a grand future.

Dr. E. Fletcher Ingals did not take an enthusiastic view of intubation excepting for young children, when he thought it would be found more satisfactory than tracheotomy. In very young children tracheotomy does not result well, and he thought intubation would be unsatisfactory in older ones until we have larger tubes. He stated the accepted opinion of surgeons to be that a tube of less than one-fourth of an inch in diameter can not furnish sufficient air for a child to live on. Dr. Ingals thought that Dr. Waxham had been remarkably successful with intubation, and had demonstrated its utility, for which he deserved credit. Dr. Ingals thought that intubation of the larynx is preferable to tracheotomy in children less than three and a half years of age; children much older than this cannot get a sufficient amount of air through the tube now in use. He said, also, that in performing one operation he had had trouble with the gag, which was not large enough for the child, a boy of five years, who lifted his teeth from the gag and closed them on the doctor's finger. He thought there was no need of the thread remaining, as there could be little difficulty in removing the tube. Dr. Ingals thought in cases where it is difficult to get the consent of friends, or where the conditions are such that tracheotomy cannot be performed right away, intubation would be of value; there are cases not membranous in which intubation may be of value. The statistics looked pretty bad for tracheotomy, but he had seen statistics of fifteen or sixteen cases where half of them were recoveries. His success had not been quite so good, but he attributed this mainly to the fact that he had operated on five children who were almost dead, or at least had stopped breathing before the operation began. He had the good fortune once to save a child who had not breathed for what seemed to him twenty minutes. One of the strong points in favor of intubation is that it may be done early, and it does no harm even if unnecessary.

Dr. H. T. Byford said there was another way of drawing the line which would more accurately describe the usefulness of the two operations. Intubation seemed to him the operation for private practice, and statistics so far are comparatively favorable to it as such. But the coöperation of the patient's friends, the preparation of the inspired air by passage through natural channels, the freedom of intubation from grave responsibility, its bloodlessness, the simplicity of treatment afterwards, as well as the greater rapidity with which the mucous membrane around the vocal chords will get well, are conditions which have less bearing in hospital practice, where we have trained nurses and all modern appliances, and there is more hope of success in tracheotomy. While he did not think this latter operation favorable for private practice, such advantages as having the tube under the eye, and within reach of the fingers, of an attendant, the ease of local medication, the possibility of removing shreds of membrane and plugs of mucus, and of inspecting the parts by removing the tube, and the longer time the tube can be retained, these are things that do not pertain to intubation, and which, in hospital practice, must secure for it some consideration. He said that there was one

clinical fact that had not been mentioned in this connection, yet which, more than all other things put together, accounts for the success of intubation and the failure of tracheotomy as life-saving measures: in the one the patient can cough; in the other he can not. After intubation the patient can normally close the glottis, compress the inclosed air in the lungs, and with sudden explosive force expel everything that is sufficiently loosened. This accounts for the fact that with such a small tube the patient experiences no difficulty. After tracheotomy the patient has no means of compressing the air and expelling it with sudden explosive force; he can simply inspire and expire forcibly and after exhausting efforts get rid of a little of the mucus. This desperate condition of affairs has led some surgeons to employ the dangerous and barbarous custom of introducing feathers or other irritants into the tube to stimulate the mucous membrane, which excites the patient and scatters the mucus both upwards and downwards. When somebody invents an appliance which will enable the patient to really cough through the tube, then tracheotomy will be placed upon a rational basis, and will stand some chance of becoming a useful operation. The doctor thought tracheotomy had made a poor showing for its years of trial.

DR. G. C. PAOLI said that malignant diphtheria is a morbid poison, and that in epidemic cases there are very few recoveries. He stated that in such cases exudation does not take place in the larynx or pharynx, and that an operation would only result in sending the patient more quickly to another world.

DR. W. E. QUINE said that he had operated twelve times for tracheotomy and had not had one recovery in diphtheritic cases. He knew he was not alone in an experience of unvarying failure in cases of this kind; and he knew some surgeons now regard tracheotomy with very little enthusiasm. It seemed to Dr. Quine unfair to place intubation of the larynx in contrast with tracheotomy upon the basis of the assumption that tracheotomy is always a *dernier ressort*, that it is done when the patient is absolutely moribund, and that intubation is done under the most favorable circumstances. This is not the fact. Dr. Quine said he was personally cognizant of two of Dr. Waxham's cases in which the patients were *in extremis*, and in which death would undoubtedly have occurred in two or three hours had not relief been afforded. Surgeons rarely had occasion to perform tracheotomy under more discouraging circumstances.

DR. J. J. M. ANGEAR said he wished to call attention to a physiological and anatomical fact that had not been alluded to, viz: that the arytenoid cartilages are not mature and that the chink of the glottis is held open by positive muscular action in small children, whereas in adults and older persons the arytenoid cartilages are mature and the chink is never closed. Dr. Angear said that a large number of children who suffocate will suffocate when there is no membrane present to cause suffocation, but simply some diseased condition that has interfered with the action of the delicate little muscles that draw back the arytenoid cartilages. When inflammatory action has interfered with these muscles drawing back the arytenoid cartilages, some mechanical interference like this tube will assist these muscles to keep the chink of the glottis open and let air in. He thought a large number of children who died of diphtheria did not choke to death, but died of poison in the system, and he did not think either the tube or tracheotomy, or any other process, could save them. If there was interference with the opening of the chink of the glottis he had no doubt the introduction of the tube would save the life of the child.

DR. J. S. KNOX said that the curses of tracheotomy are the subsequent thoracic complications, either heart-clogs or congestion and inflammation of the lungs, producing fatal results, and the reason probably is that tracheotomy is the final resort in cases of laryngeal obstruction. He thought that if tracheotomy were performed as early as intubation, there would be fifty per cent. of recoveries. The great advantage of intubation is that it can be performed early, and the early operation of intubation would no doubt save many a life that tracheotomy would not save performed late. He thought that tracheotomy performed as early as intubation would show as good results.

THE PRESIDENT said that he did not intend to say anything against the practice of intubation, but he did not believe that it would take the place of tracheotomy. Intubation has had but a very short trial, and it is not yet time to pronounce it better than tracheotomy. The early experience of the President in tracheotomy had been almost the same as that of Dr. Waxham in intubation. In the first fifteen cases operated on but half of them recovered, and his later experience was better than that reported by Dr. Waxham, as within the last month he had had three cases of tracheotomy, all recoveries, while Dr. Waxham reports four cases of intubation, all fatal. So far as his own personal experience went, he thought tracheotomy had the advantage. The President thought that if he should put a tube in a child's throat for the relief of laryngitis and the child died without his having performed tracheotomy, he should consider himself very much to blame. He had no doubt that cases of extreme diphtheritic laryngitis got well after tracheotomy; he had seen diphtheria of the pharynx and of the larynx recover after tracheotomy. Although he did not feel enthusiastic about intubation he thought it had a very good place and in many cases might be very useful, but could never supplant tracheotomy.

DR. WAXHAM said he had never found the tube occluded when it was removed. In one case when he introduced the tube a portion of the membrane was crowded down ahead of it, obstructing it entirely, and the tube was ejected and was then completely filled with membrane; the child recovered subsequently. On removing the tube on the fourth or fifth day he did not find it occluded.

DR. A. B. STRONG said, in conclusion, that he had had some experience with tracheotomy, having had twelve cases with but one recovery. He had no

doubt that in cases of diphtheria the membrane could come up through the opening. The case read was reported as spasmodic croup, and was not supposed to be one of false membrane, but he believed the child would have died without interference, and that belief was shared by Dr. Danforth, the attending physician. Dr. Strong said that he would hardly feel safe in leaving the tube in the trachea of a child without the thread. He agreed with the President that large pieces of membrane could not readily pass through such a long tube. In the case reported the tube was entirely free from membrane or pus when taken out.

## MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA.

*Stated Meeting, January 13, 1886.*

THE PRESIDENT, C. H. A. KLEINSCHMIDT, M.D., IN THE CHAIR.

T. E. MCARDLE, M.D., SECRETARY.

(*Concluded from page 160.*)

DR. H. D. FRY read a paper entitled

### SOME REMARKS ON THE MANAGEMENT OF PROTRACTED FIRST STAGE OF LABOR.

(See page 171.)

DR. J. TABER JOHNSON congratulated Dr. Fry in having brought this subject to the attention of the Society. He believed that a great deal of danger from a protracted first stage is due to its deleterious influence on the second stage. The patient enters upon this latter stage with diminished strength. The whole household, in fact, is demoralized. The mother and child are in danger; the latter from asphyxiation, the former from long-continued pressure. Dr. Fry had not referred to some of the prominent causes of the trouble under consideration; such as malpresentations, ossification of the fontanelles, failure of the head to properly mold itself, unusual small size of pelvis, rigidity of the os, and so on. Physicians have been governed too much by the oft repeated axiom concerning meddlesome midwifery. Proper scientific interference is always permissible when intelligently applied. Dr. Johnson had used electricity in labor cases, and whil he is not such an enthusiast as Dr. Baird, yet he had derived benefit from it, and had great hopes of its future. The faradic current seems to steady the contractions, in a word, to render intermittent pains rhythmical. Chloral had also proved an effective agent in Dr. Johnson's hands. He gives fifteen grains every hour until the agonizing intermittent pains are quieted and the patient is enabled to bear down with better results. The warm douche against the cervix is often beneficial. A large part of the gynecologist's practice is due to unattended labor cases. It will not do for the accoucheur to be a mere midwife; he must know when interference is demanded by the exigencies of the case. In reply to a question by Dr. Fry, Dr. Johnson said that when he had used electricity he had not found the pains less painful, but stronger and more effective.

DR. A. Y. P. GARNETT was sorry that Dr. Taber Johnson had not given us some more enlightened views on the points under discussion. He apparently in the same breath urges stimulation and relaxation. He employs faradization to shorten the first stage because it produces uterine contractions, and he counsels the use of chloral for the same purpose because of its relaxing effect. Dr. Garnett had no experience with electricity in labor, but he was desirous of knowing whether a current strong enough to produce uterine contractions might not have a harmful effect upon the fœtus. These gentlemen adopt means which have for their effects the same results obtained formerly by opium and bleeding. He was not a strong advocate of early interference, but believed in applying forceps when occasion required.

DR. JOHNSON did not pretend to any special knowledge of electricity. In labor cases this means must be employed delicately and properly. The least injurious way is to apply o..e pole to the sacral region and the other to the fundus uteri; or the accoucheur may hold one electrode in his hand and pass the other hand gently over the woman's abdomen. It is true the faradic current is used in extra-uterine pregnancy for the purpose of killing the fœtus.

DR. GARNETT asked Dr. Johnson the exact physiological action of ergot on the muscular fibres of the uterus. Ergot contracts and electricity contracts; yet Dr. Johnson advocates the use of one and deprecates the employment of the other.

DR. JOHNSON replied that ergot produced tonic contractions of the unstriped muscular fibres of the uterus, oftentimes shutting off the natural blood supply to the child. Electricity can be applied at will and need not be used so as to cause continuous contractions. Ergot also contracts the short circular fibres of the os. In reply to a question by Dr. Fry, Dr. Johnson said he had used a Kidder's battery with the ordinary hand electrodes. He placed one sponge at the back of the patient and held the other with his hand over the abdomen.

DR. FRY said he had mentioned in his paper the deleterious effect upon the first stage of the failure of the uterus and its contents to descend within the pelvic canal. The causes of delay which Dr. Johnson claims that he had overlooked were just such that prevented this descent. He thought Dr. Garnett took a narrow-minded view of the subject. In one case sedatives may be required and in another stimulants would be proper. The rational method of treating these cases is to find out the influence at work which prevents dilatation of the os, and to employ that remedy indicated for its relief. Dr. Fry exhibited the electrodes used by Dr. Baird. He believed that electricity would prove a powerful and valuable aid in overcoming feeble uterine contractions. His experience with it held out such a promise, but he did not find that the current gave relief to pain.

DR. J. M. TONER thought there was some misapprehension as to the neglect of physicians in the treatment of protracted labor cases and their indifference to the sufferings of parturient women. There

may be some difficulty at first in determining which are true and which are false labor pains. The beginning of labor is not always easily determined. He advocated the use of hot water and unguents in treating a sensitive and dry vagina.

DR. FRY said he had reference to those pains which were strong enough to keep the patient awake, prevent her from obtaining proper nourishment, which produce nervous exhaustion, and yet do not assist the progress of labor. The moisture obtained from the natural secretions is better than all ointments. Dr. Fry spoke of the benefits to be derived from the proper use of morphia and chloral, and called attention to the method of lifting the head until the bag of waters is formed.

## FOREIGN CORRESPONDENCE.

### LETTER FROM LONDON.

*Scarlet Fever from Milk—The Society of Public Analysts—St. Bartholomew's Hospital—Pasteur's Rule concerning Rabies—Spontaneous Hydrophobia.*

Dr. Wynter Blyth, Medical Officer of Health to the Marylebone Vestry, has just presented to that body a report which throws new and unexpected light on the origin of a recent outbreak of scarlet fever. A minute examination leads to the inference that every case in the outbreak referred to was traceable to the drinking of milk from a cow or cows on a model farm some distance from town. Dr. Blyth, after mentioning that Dr. Power has been deputed to investigate the matter, says, one of the cows has been bought and removed to the Brown Institution, where Dr. Klein is making experiments with the milk and secretions. It appears that between December 1st and 29th there were in the parish sixty cases of illness having this one thing in common; that the patients drank milk from one of the three dairies getting their supply from the same model farm. Some of the sufferers had simple sore throat, others a mild attack of scarlet fever, a few a severe attack. In one case death resulted. Those who drank no milk save that which had been boiled, were not attacked, and most of those who merely took a little milk in tea and coffee escaped. Children taking considerable quantities of lukewarm or unboiled milk, and adults drinking raw milk formed the bulk of cases. Several cases of infection from the cream occurred, and I had reason to believe that the disease-influence was in a more concentrated form in the cream than in the milk. This report is necessarily incomplete, for the full history will not be known until Dr. Power publishes his report and gives details relative to cases in the parishes of Hampstead and Hendon, infected either direct from the farm or indirectly through dairy, together with the results of the examination of the cows and Dr. Klein's experiments. There can be no doubt but that from these data most important discoveries may be made as to the origin of scarlet fever, and the results are awaited with much interest by the profession.

At the annual meeting of the Society of Public Analysts, Dr. Alfred Hill, of Birmingham, was re-elected President for the ensuing year. The President in the course of his address referred to the work done by the Society during the year in the advancement of science and in the improvement of analytical methods, and alluded to several matters of interest in connection with the working of the "Sale of Food and Drugs Act."

The annual Christmas festivities have just been held in the Grand Hall of St. Bartholomew's Hospital. A singular interest attaches to the history of this well-known hospital, from the fact that more than 700 years ago it was founded by one Rahere, who had been the king's jester, but later in life became a monk, whereupon he made a pilgrimage to Rome. There he visited the monastery of St. Bartholomew, situated upon an island in the centre of the Holy City, where the sick were taken in and tended by the monks. On returning to England he obtained an interview with the king, who granted him the space of ground outside of the then limits of the city—the same site on which the present hospital stands—then, as now, known by the name of Smithfield. From that date the hospital has been doing the good work in which it is now engaged, having been enriched from time by charters and grants of lands from successive monarchs, and legacies from the pious and charitable. It now possesses 13,000 acres of landed property in the home counties, and 2000 houses in the city and other parts of the metropolis. These estates are administered by a treasurer and a board of management. The nursing staff is nearly 200 strong, and consists of sisters who are distinguished by their blue dresses, the nurses being attired in dark gray and the probationers in light gray. These probationers are divided into two classes. Forty are ordinary probationers, well-educated women, who bind themselves for three years, some of them daughters of clergymen, and who receive payment for their services; whilst about eighteen are special probationers, who pay a guinea a week for instruction in the science of nursing, and for whom a home, presided over by a lady superintendent, is provided. To the present treasurer is to be ascribed the credit of introducing the system of training nurses at St. Bartholomew's, for until his appointment as treasurer, in 1873, there was not a single skilled nurse in the establishment, although there were many in the newest of our metropolitan hospitals—St. Thomas's. It should be mentioned that with the steadily increasing value of the hospital's house property—for the landed estates are, owing to the general agricultural depression, not in a very flourishing condition—is a parallel increase of expenditure, consequent on the entire reform in the system of nursing, the rebuilding of schools, museums, and class-rooms, and the maintenance of a convalescent home at Swanley, in Kent, into which home are admitted patients only who have passed through the hospital. The programme of the entertainment consisted of two dramatic pieces, sustained with much ability by the members of tne Hospital Dramatic Club. Between the pieces was a concert, the part-

songs in which were admirably rendered by members of the Hospital nursing staff and of the Hospital Musical Society. The whole was thoroughly enjoyed by a large audience.

M. Pasteur has laid down the following rules as to hydrophobia in dogs, which will be read with interest: "Every dog, whether it eats or not, that is attacked with rabies, dies in a few days. When it eats, death is delayed a few days, but that is all. It cannot live for more than ten days, and will probably die on the eighth. During the interval rabid symptoms will be shown. Lock up, therefore, and chain the dog. Be careful in feeding it, and in clearing away its litter not to go within biting distance. If it survives the tenth day you may have an easy mind. If it has bitten a person before being secured, the wound must be attended to. It should on no account be neglected. The spittle of a perfectly healthy dog may contain microbes which would cause an abscess. In very rare cases the bites of such dogs have caused septic blood-poisoning. If rabid symptoms declare themselves, a person who has been bitten should at once go to M. Pasteur's laboratory, and he will be happy to treat them for rabies. Two Hungarian soldiers who were lately bitten by a mad dog have been sent to Paris at the expense of the Government to be attended by M. Pasteur. A case has just been mentioned of well-established "spontaneous hydrophobia" in a man aged 29. Not only did all the symptoms which characterize that malady declare themselves, but the matter taken from the patient's body when he died communicated it to rabbits inoculated therewith. G. O. M.

## LETTER FROM PARIS.

[FROM OUR OWN CORRESPONDENT.]

### *Prof. Peter on the Parasitic Doctrines of Disease.*

I have more than once referred to Dr. Peter, Professor of Medical Pathology at the Paris School of Medicine, as being an avowed adversary of the parasitic doctrine that is gaining ground in the science and art of medicine of the present day. As the parasitic doctrines have been published in the medical journals almost without comment, it has been inferred in many quarters that these doctrines are unassailable. It may, therefore, be interesting to know what arguments the adversaries of these doctrines have to advance against them, and it is with this view that I here reproduce notes of a lecture recently delivered by Professor Peter on the subject. The necessary distinction, said the Professor, between the lesion and the malady has been ignored by the physicians who look upon tuberculosis as a parasitic malady and consider the rod, which the microscope has revealed in certain tuberculous lesions, as the cause of the malady. Thus we have now two tuberculoses: The tuberculosis of the old school was a general, spontaneous, intrinsic malady, created by the organism under the influence of innutrition and other debilitating causes.

The tuberculosis of the new school is a malady of extrinsic or accidental origin, produced by the invasion of a foreign body. According to this view of the matter, the bacillus is at the same time the cause and the criterion of the nature of the malady. It consequently follows that if, in the lesions which clinicians have always looked upon as being scrofulous, bacilli are found, these lesions ought henceforth to be reputed tuberculous; this would lead to the admission of the identity of scrofula and tuberculosis, which would evince gross misapprehension of clinical observation. If, on the other hand, in granulations manifestly tuberculous, one does not find bacilli, but zoogloea, the partisans of the parasitic doctrine conclude that the malady is tuberculous, but of a zoogloeic tuberculosis, which would be the height of confusion. After giving a description of the bacilli and the various maladies in which they are found, Professor Peter admits that the discovery of Koch has been a real conquest. Koch has taught us, that in revealing the existence of bacilli, to better recognize the tubercle, as Laennec taught us to recognize the divers modalities of the tubercle, the grey granulation. The crude, caseous tubercle, grey infiltration. So far the discovery of the bacillus of Koch is a conquest for morbid anatomy; it is also a conquest for semiology, as the presence of the bacillus permits us to distinguish the sputum of a tuberculous patient from that of an ordinary bronchitic case.

But since the discovery of Koch, the profession seems to have gone too far in the wake of enthusiasm. It was believed that the recognition of this rod, a pretended parasite, was going to open a new era to the therapeutics of tuberculosis. It is a strange error which consists in deducing therapeutics from morbid anatomy, which is only the natural history of lesions, as semiology is the natural history of symptoms, and in confounding the lesion, which is only a product, with the malady, which is an act, it will be just as if one confounded surgery with medicine. The lesion is a "*fait accompli*." It is a manifestation of a deviation of nature, but at the same time acting. The surgeon acts on the lesion when he treats a fracture; the physician struggles against an act when he treats a case of pneumonia or of pleurisy. It is to the living nature of the pneumonic, to the vitality of the pleuritic, that he should address himself. Medically speaking, in discovering the bacillus, there was no therapeutic conquest made; as the parasite was considered, hypothetically, the cause of tuberculosis, it was thought that by impeding the life of the parasite one would cure the tuberculous affection. This, said the Professor, is a gross error.

After giving a description of the origin and development of the various bacilli, as shown in the laboratory, M. Peter thinks that these pretended parasites originate in our own organisms, that the different viruses generated in us may be transformed under certain influences into agents of protection of the organism, and M. Pasteur ought to be commended for his researches and his experiments, but we must not cry victory too soon.

In concluding his lecture, Professor Peter explained why he should be so embittered against the parasitic doctrines, "which seem to spread after the fashion of the parasites;" it is because those in favor of the

doctrine "are mistaken in taking the effect for the cause, a morbid product for a generator of disease, and analogy for identity." Certain consequences of such confusion broke out in the famous inoculations of Ferrán, who pretended to produce an experimental cholera, as are so many experiments of the kind as performed in laboratories. As there is no error which has not its sanction, the parasitic doctrine has had one in a social and medical point of view. To consider tuberculosis as parasitic is to admit that all phthisical subjects had caught the disease by contagion and that they can communicate it to others by contagion. The therapeutic consequence is to seek to combat the parasite without, in organizing quarantines against tuberculous subjects, and within in administering microbicide substances such as creosote, carbolic acid, etc. Finally, M. Peter finds the social sanction in the reproduction, in our times, of savage scenes worthy of another age. That which was seen lately at Naples and at Sicily, for the cholera, takes place every day, every year, in certain towns in the south of Italy, where the landlords compel the unfortunate subjects of phthisis to cancel their leases. It is to prevent the generalization of such monstrous acts that M. Peter believes it his duty to combat with all his force, to convince his confrères, to instil his ideas into his pupils, and to keep the public on their guard against the delusions which trouble the brains of our contemporaries.

Prof. Peter was a pupil and friend of Trousseau, whose doctrines he is supposed to have fully imbibed, and from his present position his opinions are worthy of some consideration. A. B.

## DOMESTIC CORRESPONDENCE

### THE NINTH INTERNATIONAL MEDICAL CONGRESS.

TO THE EDITOR OF THE JOURNAL:

*Dear Sir:*—There is one significant fact in this matter of the next meeting of the International Medical Congress, which has not attracted attention, which to the writer seems important, namely, the *undue haste* exhibited by the Original Committee of Seven to get out their work *ad captandum vulgus*. The editor of the *Philadelphia Medical News*, in his specious editorial reply to "Country Doctor" in his issue of January 30, although *he was one of the seven*, carefully abstains from any explanation of it.

These seven, whom he with characteristic modesty describes as "*the most eminent contributors to the advancement of medical science* in the country in which the Congress was to meet," were commissioned by the American Medical Association in May, 1884, to go to Copenhagen and invite the Congress to hold its next meeting in this country. They satisfactorily performed this office, and through their spokesman promised the members a generous welcome, he pledging himself to do a variety of things without reservation (expressed, at least), as to the contingency of his not being allowed to have everything his own way (I do not mean the editor of the *Medical News*). They hied home, went to work upon an organization which showed the evidences of the personal preferences and enmities of some of the individual seven, and published all over Europe their cut-and-dried scheme for a meeting which was not to take place until 1887, without waiting the few weeks before the meeting of the American Medical Association, to report their work to that Association in whose name, by whose authority and under whose appointment only they had anything whatever to do with the matter.

Now let us see how differently things were managed for the Seventh Session of the International Medical Congress, which was held in London in 1881. At the Sixth Session of the Congress, held at Amsterdam in September, 1879, it was determined to hold the next meeting at London, in 1881, and in September, 1880, one year after the adjournment of this Sixth Session, and *only eleven months* before the convening of the Seventh, a circular was issued from London, signed J. Risdon Bennett, Chairman of the Executive Committee, and William MacCormac, Secretary-General, which stated as follows:

"We have the honor to inform you that at the close of the Sixth Session of the International Medical Congress, held last September in Amsterdam, under the presidency of Professor Donders, of Utrecht, a unanimous desire was expressed that the next meeting should take place in Great Britain in 1881.

"This desire having been communicated to the presidents of the Royal College of Physicians and Surgeons in London, they convened a meeting of delegates from the various universities, colleges and other public bodies of the United Kingdom, including the principal medical societies, the British Medical Association, and the medical departments of the army, navy and India office, in order to obtain a thoroughly national representation of feeling and opinion.

"The response to this appeal having been most cordial, it was decided at the meeting of delegates thus convened to comply with the wish expressed at the meeting at Amsterdam, and to hold the Congress in London. A general committee of organization was appointed, an executive committe, and a reception committee to carry out the necessary details.

* * * * * * *

"The work of the Congress will be carried on in fifteen Sections. The days of the meeting will extend from Wednesday, the 3d, to Tuesday, the 9th of August, both days included. A reception of welcome will take place on the evening of August 2."

The London *Medical Times and Gazette* (since gone out of existence) rebuked the *London Lancet* for according to the American Medical Association any consideration whatever in the organization and control of the Congress, asserting that it only has a membership of 3,000 members against 40,000 physicians excluded from the Congress by its present Committee on Organization. The *British Medical Journal*, which is no better informed than this as to the representative character of the American Medical Association, may well be suspected of arguing *ex parte*, but there are American medical journals which have reproduced this unfounded statement without contradiction or correction. Assuming that the American Medical Association was not the only source whence "to obtain a thoroughly national representation of feeling and opinion," as was obtained in Great Britain; on what assumption can the Original Committee of Seven or the coadjutors they themselves selected to constitute the General Committee with them, claim to have accomplished this result?

Were they authorized to act for the American Surgical Association, the American Gynecological Association, the American Ophthalmological and Otological Association, the American Laryngological Association, the American Academy of Medicine, the American Climatological Association, the American Public Health Association, the Medical Departments of the Army, Navy and Marine Hospital Service, the Canadian Medical Association, or, indeed, for anything but the medical profession as represented by the American Medical Association?

If there is any doubt in Europe that a *thoroughly national* representation of the profession of medicine in this country can be obtained through the American Medical Association, then let there be "convened a meeting of delegates from the various universities, colleges and other public bodies" in the United States (and Canada), including the principal medical societies, the American Medical Association and the Medical Departments of the Army, Navy and Marine Hospital Service, in order to obtain such a thoroughly national representation as was done at London. There is ample time for such a meeting. The Ninth Session of the Congress need not assemble until the autumn of 1887. There is not such a mighty need of preparation that an active Executive Committee cannot accomplish it all within six months. Many of the previous meetings of the International Medical Congress have been held at intervals of only two years, thus:

The First Session was held at Paris, in 1867; the Second in Florence, in 1869; the Third in Vienna, in 1873; the Fourth in Brussels, in 1875; the Fifth in Geneva, in 1877; the Sixth in Amsterdam, in 1879; the Seventh in London, in 1881; the Eighth in Copenhagen, in 1884; and the Ninth will be held in Washton, in 1887.

If the American Medical Association cannot be entrusted with the task of organizing the Congress, in the name of the whole medical profession of this country, through its present Executive Committee, certainly the Original Committee of Seven, also appointed by it, can allege still less sanction for their dictatorial proceedings. When the editor of the *Medical News*, who was also one of the Seven, "one of the most eminent contributors to the advancement of medical science" in his country, Member of the General Committee and Chairman of the Executive Committee, writes to "Country Doctor" that "at both the London and Copenhagen meetings *irregular* physicians are known to have inscribed their names on the register and the fact *did not in the least* disturb the Committee on Organization or detract from the success of the meeting," does he intend the medical profession to understand that subscription to the Code of Ethics of the American Medical Association does not mean, so far as he and the rest of the Original Committee of Seven are concerned, an honest, manly belief in its principles, acceptance of its restrictions and observation of its obligations, at all times and under all circumstances, but that he and they did similarly intend not to be in the least disturbed when *irregular* physicians inscribed their names on the register, and to sit in cheek-by-jowl fraternity with them in a way no New York *New Coder* ever dreamed of doing? In this country, be it remembered, the homœopath is not the only species of the *irregular* physicians, but the eclectic and electric—the botanic and the hygeio-therapeutic—and a dozen more, are just as *legally* recognized as the editor of the *Philadelphia Medical News*.

MEDICUS.

## BOOK REVIEWS.

PROCEEDINGS OF THE NEBRASKA STATE MEDICAL SOCIETY. Seventeenth Annual Session, held at Grand Island, May 26–28, 1885. 8vo, pp. 385. Lincoln: 1885.

This well-printed volume of Transactions contains much more interesting and valuable material than is usually found in State Society Transactions, and the papers are conveniently classified under their proper sections of medicine, surgery, etc. Under the Section on Surgery we find seven papers, all of some and some of great interest.

The first surgical paper is the history of a case of *Penetrating Gunshot Wound of the Abdomen*, by Dr. J. K. L. Duncan, of DeWitt. The patient recovered under treatment by opium and rest, though the ball penetrated the intestine, as shown by the fact that it was passed with the fæces. The author assumes in the paper that the bullet, 38 calibre, injured the left kidney, the assumption being based on the fact that a few blood-corpuscles were found in the urine on the fourth day. As the ball entered the abdomen about one inch above the umbilicus, and then lodged in the intestine it does not seem possible that it could have reached the kidney, even though it "ranged inward, downward, and somewhat to the left."

Dr. Duncan also reports a case of *Compound Fracture of the Skull, with Depression*, in which the skull was trephined, and recovery resulted. The case was that of a boy, age not given, over whose head one wheel of a wagon loaded with grain had passed. He was picked up in an unconscious condition, in which he was when Dr. Duncan saw him about twenty-eight hours after the injury. Examination showed a fracture of the right parietal bone over the middle posterior portion, and extending into the posterior superior portion of the squamous portion of the temporal bone. Having obtained assistance Dr. Duncan made a semi-circular incision extending somewhat over the sound portion of the parietal, and found a depressed fracture. The centre-pin of a trephine was placed on the sound table of the parietal bone, superior to the upper line of fracture, so near the fracture that a portion of the circle of the groove (using Galt's conical trephine) would extend partly over the depressed portion of the bone and internal to the line of fracture, making the groove evenly to the internal table; thus enabling him to remove the disk very readily. One portion of the depressed bone had penetrated the dura mater, and was removed entire; the other portion was elevated. The whole wound was then dressed antiseptically. The wound

was dressed on the third day, and the stitches were removed and a collodion and cotton dressing put on the sixth day. A fortnight later the boy was in perfect health. In connection with this case we may mention one of *Depressed Fracture of the Skull, with Laceration of the Dura Mater and Loss of Brain Tissue*, reported by Dr. M. L. Hildreth, of Lyons. A boy, aet. 6 years, was kicked on the top of the head by a horse. There was a contused wound of the scalp extending backwards and to the right from a point one-half an inch to the right of the median line, and at about the junction of the frontal and parietal bones, for a distance of about five inches. Anteriorly the wound extended through the bone, and one edge of the fracture was depressed to the extent of about half an inch. There was some twitching of the extremities, but no paralysis, and the patient was "indifferent on being aroused, and inclined to be let alone." Having failed to elevate the depressed bone with such instruments as he had with him, Dr. Hildreth determined not to trephine unless subsequent symptoms should demand it; the idea being that the loss of brain tissue would obviate the tendency to compression. He was inclined to think that it would be better to leave the depressed portion of bone where it was than to create a cavity by elevating it, and thus render drainage less perfect. The scalp was shaved, drainage provided for, adhesive plaster to retain flaps, antiseptic compresses, and bandage. A considerable amount of sloughing occurred under one flap, which was badly contused. Brain tissue continued to escape from the opening for about ten days, aggregating the amount of ℥ss, when it ceased and the opening filled with fibrous tissue. Two small pieces of detached bone came away during the process of healing. Recovery took place without unfavorable symptoms. (The case was reported five months after the occurrence of the accident).

The dictum of Legouest, "whenever there is a doubt whether trephining should be done, this doubt is probably an indication that the operation should be performed," ought to be paraphrased "whenever there is a doubt as to whether a depressed portion of bone should be elevated, this doubt is an indication that it should be elevated." In the case reported by Dr. Hildreth it is very doubtful if so much as half an ounce of brain tissue would have escaped had the depressed portion of bone been elevated. In any case of doubt it is certainly better to incur the comparatively slight risks of early operation than the greater risks of a probably late operation, or subsequent epilepsy or insanity. In the case under consideration it seems that whatever drainage was required could certainly be better established even after the creation of a cavity than by running the risk of a cavity of suppuration under the depression where it could not be easily reached. There can scarcely be a doubt that it is better to operate when the depression is marked, even without brain symptoms; and a depression of three-eighths or one-half of an inch is to be regarded as marked depression. Dr. Hildreth also reports an interesting case of *Severe Concussion of the Spine, with probable Hæmorrhage*, due to a fall upon the back on frozen ground, from a height of fifty feet. There was complete motor paralysis below the 9th dorsal vertebra, with hyperæsthesia of legs and feet, and subsequent myelomeningitis belladonna, bromide of potassium, and ergot, with blisters on either side of the spine opposite the point of injury, were administered during the period of fever. The patient was able to walk with a cane in the course of six weeks, and continued to improve; but the paralysis of the bladder and rectum continued. Dr. J. S. Leonhardt, of Seward, reports three cases of fracture, two of the superior maxilla, and one of the surgical neck of the humerus, which were successfully and ingeniously treated. In the Section on Forensic Medicine and Toxicology is another interesting paper by Dr. Leonhardt, on *Six Cases of Poisoning with Treatment*, the poisoning agents being Blackberry Balsam, phosphorus, aconite, carbolic acid, arsenious acid, and three cases of poisoning by nutmeg, all of which recovered.

On the whole this number of the Transactions of the Nebraska State Medical Society is far above the average State Society publications. We could wish, however, that the writers would be a little more careful in the matter of spelling ("clo. pot." does not stand for any drug in common use), and that the next volume will not show so much extraneous matter. Nothing so mars the value and elegance of an article as remarks seemingly intended to be rather funny. We also note a tendency in some of the articles towards sarcastic remarks. Happily these are faults that can be remedied. Elegance will often atone for a want of intrinsic value in an article, and inelegance has ruined many otherwise good papers.

A TREATISE ON EPIDEMIC CHOLERA AND ALLIED DISEASES. By A. B. PALMER, A.M., LL.D., Professor of Pathology, Practice of Medicine, and Clinical Medicine in the College of Medicine and Surgery in the University of Michigan, etc. Ann Arbor, Mich.: Register Publishing House. 1885.

This is a well printed octavo volume of 222 pages, embracing the consideration of Epidemic Cholera, Serous Diarrhœa, Cholera Morbus, and Cholera Infantum. The author devotes the first 67 pages to a brief historical statement of the progress of the chief epidemics of cholera in modern times, and a very interesting and impartial account of investigations in regard to the etiology of the diseasy up to the present time. While he gives to local meteorological and sanitary conditions an important if not controlling influence as necessary predisposing causes, he clearly favors the doctrine of a specific or essential cause, and that of an organic living germ. But after giving due weight to all the interesting microscopic researches of the last three or four years, he does not regard it as satisfactorily proved that the comma bacillus of Dr. Koch is the essential cause of epidemic cholera. The next 29 pages are occupied by a good résumé of the symptoms and morbid anatomy or pathological changes resulting from the progress of the disease. The next 43 pages contain a very full review of the current views concerning the Prophylaxis of Cholera. The comments of the author are characterized by sound discrimination and good

sense. The same good judgment, aided by personal experience, is seen in the full consideration which the author gives to the treatment of the disease, occupying 55 pages of the book. The remaining 32 pages of the book are devoted to a very brief consideration of the diseases which the author calls allied to cholera. This monograph is well worth a place in the library of every practitioner.

THE FIELD AND LIMITATION OF THE OPERATIVE SURGERY OF THE BRAIN. By JOHN B. ROBERTS, A.M., M.D., Professor of Anatomy and Surgery in the Philadelphia Polyclinic, Surgeon to St. Mary's Hospital. 8vo, pp. 80. Philadelphia: P. Blakiston, Son & Co. 1885. Chicago: W. T. Keener.

This little volume, a reprint of the paper read by Dr. Roberts at the last meeting of the American Surgical Association, is one of the most valuable monographs that has appeared in America for many years. Its value consists in its brevity, its being concise and always to the point, and its wholesome disregard of traditions when experience shows that they are untrustworthy. We have already expressed our opinion of this volume in the editorial columns of this week's issue of THE JOURNAL.

## ASSOCIATION ITEMS.

### INFORMATION OF IMPORTANCE TO ALL MEMBERS OF THE PROFESSION IN AMERICA.

HOW TO OBTAIN MEMBERSHIP IN THE AMERICAN MEDICAL ASSOCIATION.

MEMBERSHIP.—Every one who attends an annual meeting of the Association as a delegate pays at that time five dollars, and thenceforward becomes a Permanent Member. He continues as such so long as he remains in good standing in the body from which he was originally sent as a delegate. As a Permanent Member, he must pay *Five Dollars Annually*, when notified by the Treasurer, whether he attends the meetings of the Association or not. Payment of annual dues entitles him to receive the weekly JOURNAL of the Association for one year.

MEMBERS BY APPLICATION are such as have not become Permanent Members in the manner above indicated, but apply to the Treasurer for membership, forwarding at the same time to him five dollars and the certificate of the President and Secretary of their State or local society, that they are in good standing in such society. They pay five dollars annually thereafter, when notified by the Treasurer. Members by application can join the Association at any time, and they receive regularly the weekly JOURNAL.

WHEN DUES ARE PAYABLE.—The annual dues from Permanent Members are payable to the Treasurer at the time of the annual meeting of the Association, or immediately thereafter. The payment entitles the member to receive the JOURNAL for one year from the following July. Payment for 1885, for example, entitles the member to the JOURNAL from July, 1885, to June, 1886, inclusive.

As some of the members have not yet forwarded to the Treasurer their dues for 1885, they are urgently requested to do so at an early day. Having entered upon another year of membership, they are morally and legally responsible to the Association for the payment of their annual dues, having already received for three months of the new year—1885—the JOURNAL of the Association.

SUBSCRIPTIONS TO THE JOURNAL, from those who are not members of the Association, should be forwarded to the office of publication, 65 Randolph Street, Chicago, and not to the Treasurer; but *all payments of annual dues must be forwarded to the Treasurer, Lock Box 1274, Philadelphia.*

DEATHS.—When a member of the Association, who is in regular receipt of the JOURNAL, dies, his family or other representatives are requested to inform the Treasurer at once of the fact.

PAYMENT OF DUES FOR PREVIOUS YEARS.—As a few members of the Association are still in arrears for payment of dues for 1883 and 1884, they are requested to forward at once to the Treasurer the amounts for which they are indebted to the Association.

TRANSACTIONS OF THE ASSOCIATION.—These annual volumes, thirty-three in number, to 1882 inclusive, may still be obtained, with few exceptions, from the Treasurer, at reduced prices. The Index to these volumes will be forwarded on receipt of *One Dollar*. An opportunity is thus afforded to complete sets of these valuable publications, or to obtain important papers and works which are daily becoming scarce.

RICHARD J. DUNGLISON, M.D., *Treasurer.*
Lock Box 1274, Philadelphia, Pa.

## MISCELLANEOUS.

THIRD ANNUAL MEETING OF THE OHIO STATE SANITARY ASSOCIATION, TO BE HELD IN COLUMBUS, FEB. 24 AND 25, 1886.

*First Session, 9:30 A.M. Standard Time, Feb. 24.*—Reading of Minutes of Previous Meeting, Report of Standing Committees, Miscellaneous Business. "The Relations of Christianity to Public Health," E. R. Eggleston, M.D., Mt. Vernon. "Mistakes in School Architecture," Prof. P. W. Search, Sidney. "Defective Vision of Children; causes and management; with reference to pupils in our common schools," D. R. Silver, M.D., Sidney. "The necessities of Physical Education," A. H. Brundage, M.D., Xenia.

*Second Session, 1 P.M. Standard Time.*—"The Plague of Streets," Judge Silas H. Wright, Lancaster. "The Climate of the Staked Plains, with particular reference to Midland Texas as a Health Resort," C. A. Lee Reed, M.D., of Hamilton. "The Climate of Columbus," Starling Loving, M.D., of Columbus. "What our Country People should know about Drainage and Sewerage," H. M. Fisher, M.D., Akron. "Introduction of Sanitary Science in Villages," T. G. Barnhill, M.D., Finlay. "Municipal Sanitation," C. L. Van Pelt, M.D., Toledo.

*Third Session, 7 P.M. Standard Time.*—To be held in Senate Chamber, Capitol. Address of Welcome, His Excellency, J. B. Foraker, Governor of Ohio. President's Annual Address, "The Progress of Sanitary Science," Prof. Edward Orton, LL.D., Columbus. "Food and its Relation to Disease," J. H. Herrick, M.D., Cleveland. "Artificial Feeding of Infants," W. J. Conklin, M.D., Dayton. Annual election of officers; selection of next place of meeting.

*Fourth Session, 9:00 A.M. Standard Time, Feb. 25.*—"Condensed Milk," F. H. Darby, M.D., Morrow. "The Meat Question," E. T. Nelson, Ph. D., Delaware. "Who is Responsible for the Iniquities of the Third and Fourth Generations, and how can they be avoided?" R. Harvey Reed, M.D., Mansfield. "Domestic Hygiene," G. C. Ashmun, M.D., Cleveland. "Sanitary Plumbing and House Drainage," James Allison, Cincinnati.

*Fifth Session, 1 P.M. Standard Time.*—"Tests for Impurities in Water available for Physicians' Use," Curtis C. Howard, M.C., Columbus. "Purified as by Fire," G. S. Franklin, A.M., M.D., Chillicothe. "Bovine and Humanized Virus and Supply of Virus," H. J. Sharp, M.D., London. "Cholera and its Prevention," D. N. Kinsman, Columbus. Miscellaneous business, introduction of officers-elect, appointment of standing committees, adjournment. The headquarters of the Association will be held at the Neil House.

Arrangements have been completed for the usual reduction of rates on all the railroads centering at Columbus; members will be returned at one cent a mile.

EDWARD ORTON, LL.D.,
President, Columbus.

R. HARVEY REED, M.D., Sec'y, Mansfield.

The following named railroads will return all attending the meeting at *one-third* the lowest unlimited fare, provided they apply to the Secretary, R. Harvey Reed, M.D., Mansfield, Ohio, within a week or ten days of the time of the meeting, and obtain the necessary certificate for the same, giving the name of the road and the station they desire to start from: Baltimore & Ohio; Chicago, St. Louis & Pittsburgh; Cleveland, Columbus, Cincinnati & Indianapolis; Cleveland, Akron & Columbus; Columbus & Cincinnati Midland; Columbus, Hocking Valley & Toledo; Indiana, Bloomington & Western; Pittsburgh, Cincinnati & St. Louis; Scioto Valley; together with all the important lines between Pittsburgh, Wheeling and Buffalo on the East, and Chicago and St. Louis on the West.

Return tickets will be issued at Columbus during the meeting at *one cent a mile*, on presentation of certificate from the Secretary, to all who come, and paid full fare over the Toledo & Ohio Central R'y.

---

THE PLYMOUTH, PENNSYLVANIA, WATER COMPANY, is reaping a whirlwind of legal action. Fourteen suits have been brought against it in the courts of Luzerne county by the relatives of those who died of typhoid fever last summer. It is probable that many more will be brought. It is claimed by the plaintiffs that the fever had its origin in contaminating material which reached the water supply from a cabin on the banks of a stream which feeds the Plymouth reservoirs. The result of the trial will be looked for with interest, as it will be difficult to prove the trail of a typhoid fever germ. Should the plaintiffs succeed in recovering judgment for damages against the company it would tax the resources of it to a severe point, but there would be a warning to other water companies. They will have to learn that the public health of which they are so largely the conservators, is a trust so sacred that they must use the utmost precaution to prevent the conveyance of disease through water they supply. The water-shed must be made a subject for the keenest scrutiny.

If the plaintiffs in these suits recover damages it it may be a warning to cities who control their own works, as well as to private water companies. It is a question whether a municipal government is not as liable when it supplies impure water as it is when a leg is broken by imperfect sidewalks. The care of the water-supply does not receive the attention from the public that it should, and a few successful suits for damages will show the public that it is within its power to demand pure water.—*Sanitary News*, January 16, 1886.

---

SANITARY CONVENTION AT HOWELL, MICHIGAN.—The Michigan State Board of Health will hold a Sanitary Convention, at Howell, on March 3 and 4.

---

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JANUARY 30, 1886, TO FEBRUARY 5, 1886.

Major Richard S. Vickery, Surgeon, assigned to duty in connection with the Army and Navy Hospital at Hot Springs, Ark. (S. O. 24, A. G. O., Jan. 29, 1886.)

First. Lieut. A. R. Chapin, Asst. Surgeon, relieved from temporary duty at Ft. Robinson, Neb., and to rejoin his proper station, Ft. Laramie, Wyo. (S. O. No. 11, Dept. Platte, Feb. 2, 1886.)

---

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY, DURING THE WEEK ENDING FEBRUARY 6, 1886.

Babin, H. J., Surgeon, ordered to U. S. Str. "Vandalia."

Dixon, W. S., Surgeon, ordered to Marine Rendezvous, New York, to relieve Surgeon Babin.

Whiting, Robert, P. A. Surgeon, ordered to U. S. Str. "Vandalia."

---

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE FOR THE THREE WEEKS ENDED FEBRUARY 6, 1886.

Bennett, B. H., Asst. Surgeon, died at Detroit, Mich., Feb. 3, 1886.

Watkins, R. B., Asst. Surgeon, to proceed to Detroit, Mich., for duty. Feb. 3, 1886.

Pettus, W. J., Asst. Surgeon, appointed an Assistant Surgeon Feb. 5, 1886. Assigned to duty at New Orleans, La., Feb. 6, 1886.

---

## CORRIGENDUM.

In the article on "Coryza" by Dr. Geo. N. Monette, JOURNAL of January 30, on 4th line of 1st paragraph read *heating houses* instead of "treating processes." In 3d paragraph read *moss factories* for "mop factories." The formula at end of article should read Bismuth subnit. 3i, Iodoform, 9ij. S. Apply locally.